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Notes on the history of Religion in the Himálaya of the N. W. Provinces.
Part I.—By E. T. Atkinson, B. A., F. R. G. S., B. C. S.
(Concluded from page 103, *No.* 1 *of* 1884.)

Funeral Ceremonies.

The ceremonies to be observed at funerals are found in the *Preta-manjarí*, the authority on this subject which obtains in Kumaon. This work opens with the direction that when a person is *in extremis* his purohita should cause him to repeat the hymn to Vásudeva and the *smaraṇa* in which the names of Ráma and S'iva occur, and after these make the *daśadána* or bestowal of ten things in accordance with the *sútra** :—'The learned have said that cattle, land, sesamum, gold, clarified butter, apparel, rice, molasses, silver and salt are included in the ten gifts.' In bestowing the *daśadána*, the sick man or in his stead the *purohita* first rinses his mouth and consecrates the *argha* and then repeats the *práṇáyáma* as already described. The meditation or *dhyána* appropriate is that known as the *S'ríparameśvarasmṛita* or meditation on the Supreme being as distinguished from and above his particular manifestations as S'iva and Vishṇu. This is followed by the *sankalpa* or dedication of the gifts with the same mantra as used in the Ganeśa-*pújá* (*Oṃ Vishṇu*, &c.), ending with the prayers that there may be a removal

* *Go-bhú-tila-hiraṇyájya-vásodhánya-guḍáni cha raupyaṃ lavanam ity áhur daśadánáni paṇḍitáḥ.*

of all sins committed wittingly or unwittingly by the dying man during his life-time and that he may obtain the fruit of his good acts. For this purpose on the part of the moribund each of the gifts and the Bráhmans concerned are reverenced, and the gifts are then presented.

Kapilá-dána.—First the *kapiládána* or a gift of a cow of a yellowish-brown colour with the five *mantras** beginning with :—*Idaṃ vishṇur vichakrame tredhá nidadhe padaṃ samúḍham asya páṃsure* and in practice this alone is recited. Then the *argha* is presented to the Bráhman with a *mantra*† praying him as best of men to be present at the sacrifice and accept the *argha*. Then sandal-wood is given with a *mantra*‡ and rice with another *mantra*.§ Flowers are then presented with the *mantra* :—'Glory to thee, O Bráhman.' Next the cow should receive veneration with the appropriate *mantra* :—'Glory to thee O Kapilá,' and each of its members, the fore-feet, mouth, horns, shoulder, back, hind-feet and tail with a salutation and the gift of sandal, rice and flowers. A covering is then presented with food, incense, light, and the installation hymn :—*Yá Lakshmiḥ sarvvalokánáṃ*, &c. Then the moribund takes sesamum, *kuśa*-grass, barley, and gold in a pot of clarified butter and with them the cow's tail in his hand over which water is poured, and all are dedicated to the removal of the guilt of his sins and for this purpose are given to so and so Bráhman in the name of Rudra. The cow is first addressed, however, with the mantra :—*Kapile sarvva-varṇánáṃ*, &c. The cow and Bráhman then circumambulate the moribund, who with clasped hands repeats a verse‖ in praise of the cow.

Bhúmi-dána.—Next comes the *Bhúmi-dána* or gift of land. The installation hymn (*prárthana*) beginning :—*Sarvvabhútáśrayá bhúmiḥ, &c.*, is first addressed to the earth. Then a ball of clay is made from the soil of the land which is intended to be given away and is worshipped and dedicated as in the previous gift and then after consecration, is given away for Vásudeva's sake to the Bráhman. The *Tila-dána* or gift of sesamum follows with the mantra :—*Tiláḥ suvarṇa-samáyuktáḥ*, &c., and the usual consecration and dedication in the name of Vishṇu and the hymn of praise :—*Tiláḥ pápahará nityaṃ, &c.*

* These mantras are practically unknown to the mass of the people who have much simpler ritual feebly on the same lines.

† *Bhúmidevágrajanmási twaṃ viprapurushottamapratyakshe yajña-purushaḥ argha'yaṃ pratigrihyatám.*

‡ *Gandhadwáráṃ durádharshám nityapushṭáṃ karishiníṃ iswaríṃ sarvabhútánáṃ tám ihopahvaye śriyam.*

§ *Namo brahmaṇyadeváya gobráhmaṇahitáya cha jagaddhitáya Krishṇáya Govindáya namonamaḥ.*

‖ *Oṃ gávaḥ surabhayo nityaṃ gávo guggula-gandhikáḥ, &c.*

Next comes the *Hiraṇya-dána* or gift of gold with a mantra* :—and the usual dedication, &c., in the name of Agni. The *Ajyadána* or gift of clarified butter is next made with the mantra :—'Sprung from Kámadhenu, &c.,' and the dedication in the name of Mṛityunjaya. The procedure is the same all through, the *mantras* used alone being different For the *Vastra-dána* or gift of apparel we have the mantra :—'*Píta vastra*, &c.,' and the dedication in the name of Vṛihaspati. The *Dhánya-dána* or gift of rice of seven kinds has the mantra :—'*Dhányaṃ karoti dátáram*, &c.,' and is presented in the name of Prajápati. The *Guṛadána* or gift of molasses has the mantra :—'*Guḍa manmathachápottha*, &c.,' and is given in the name of Rudra. The *Raupya-dána* or gift of silver has the mantra :—'*Rudranetra-samudbhútam*, &c.,' and is offered for the sake of Soma, the moon, with the prayer that any laxity in morals may be forgiven. The *Lavaṇa-dána* or gift of salt follows with the mantra :—'*Yasmád annarasáḥ sarve*, &c., and is presented on behalf of all the gods

Last service for the dying.—The moribund next presents the fruit of all the ceremonial observances that he has undertaken during his life to plead on his behalf with Íśvara. He also dedicates sesamum, *kuśa*, barley and water and enumerates all the penance that he has performed during his life and commits it with an oblation to the mercy-seat in the name of Agni to plead on his behalf. He then prays that for the sake of the good Vásudeva whatever errors he may have committed in ceremonial or other observances knowingly or in ignorance, in eating or drinking and in his conduct towards women or men may be forgiven, for which purpose he offers gold. A similar gift of a cow is sometimes made to clear off all debts due to friends and others, but the practice has fallen into disuse, as the heir, according to the usage of the British law-courts, must pay his father's debts if sufficient assets fall into his hands.

Vaitaraṇí-dána.—Another cow should be presented in Góvinda's name to prevent the retribution due on account of evil acts of the body, evil speech in words and evil thoughts in the heart, and again another cow in the hope of final liberation (*moksha-dána*) through the loving-kindness of Rudra and in his name. As a rule, however, but one cow is given, and this only in the *Vaitaraṇí-dána* which now takes place. For this rite a cow of a black colour is selected and worshipped as prescribed in the *Kapilá-dána*, and the gift is dedicated to help the spirit of the moribund after death in its passage across the Vaitaraṇí river, and with this object it is formally delivered over to a Bráhman. The installation verse for

* *Hiraṇyagarbha-garbhastham hemabíjaṃ vibhávasoḥ, ananta-puṇyaphaladam atoḥ śántiṃ prayachchha me.*

the cow is—'Glory to thee, O cow, be thou ready to assist at the very terrible door of Yama this person desirous to cross the Vaitaraṇí,' and for the river in the verse:—"Approaching the awful entrance to the realms of Yama and the dreadful Vaitaraṇí, I desire to give this black cow to thee, O Vaitaraṇí, of my own free-will so that I may cross thy flood flowing with pus and blood, I give this black cow." Selections from the *Bhagavad-gítá* are then read to the sick man and the thousand names of Vishṇu are recited. His feet and hands are bathed in water taken from the Ganges or some other sacred stream whilst the frontal mark is renewed and garlands of the sacred *tulsí* are thrown around his neck. The ground is plastered with cow-dung and the dying man is laid on it with his head to the north-east and if still able to understand, verses in praise of Vishṇu should be recited in a low, clear voice suited to the solemn occasion. The priestly instinct is even now alive and the family astrologer appears on the scene to claim another cow that the moribund may die easily and at an auspicious moment.

Preparing the body for the pyre.—When the breath has departed, the body of the deceased is washed with earth, water and the fruit of the *Emblica officinalis* and then anointed with clarified butter whilst the following mantra* is repeated:—"May the places of pilgrimage, Gayá and the rest, the holy summits of mountains, the sacred tract of Kurukshetra, the holy rivers Ganges, Jumná, Sárasvati, Kosi, Chandrabhága which removeth the stains of all sins, the Nandábhadra the river of Benares, the Gandak and Sarju as well as the Bhairava and Váráha places of pilgrimage and the Pindar river, as many place of pilgrimage as there are in the world, as well as the four oceans, enter into this matter used for the ablution of this body for its purification." The body is then adorned with *gopichandana*, the sacrificial thread, yellow clothes and garlands. Gold or clarified butter is then placed on the seven orifices of the face and the body is wrapped in a shroud and carried to the burning-ghát. The body is placed with its head to the east and the face upwards whilst the near male relatives are shaved. In the meantime *piṇḍas* or small balls of barley-flour and water are offered according to the rule:—*Mṛitistháne tathá dwáre víśrámeshu chitopari; kukshau piṇḍáḥ pradátavyáḥ pretapiṇḍáḥ prakírtitáh*—'Where the man dies, at the door (of his village), where the bearers rest, at the pyre upon his body, these (five) *piṇḍas* should be offered by rule; these are

* *Gayádíni cha tírthání ye cha puṇyáḥ śilochchayáḥ; kurukshetraṃ cha gangá cha yamunā cha sarasvatí, kauśikí chandra-bhágá cha sarvapápaprandśiní, nandá bhadrá cha káshí cha gaṇḍakí sarayú tathá, bhairavaṃ cha váráhaṃ cha tírthaṃ piṇḍarakaṃ tathá, pṛithivyáṃ yáni tírthání chatwáraḥ ságarás tathá, śavasyásya víśuddhyarthaṃ asmin toye víśantu vai.*

well known as the *pretapiṇḍa*. Each *piṇḍa* should have its proper dedication with definition of time, place, and person (*mṛitisthána, dwára, &c.*) First some water is thrown on the ground with a dedication, and then the piṇḍa is taken in the hand and after the recital of the dedication, it, too, is thrown on the ground and again water is sprinkled on the same place with a third dedication. This is repeated at each of the five places. The wood of sandal, cedar, *bel*, or *dhák*, mixed with ghí, are laid on the body, which is placed on the pyre with the head to the south. The son, or nearest male relative, bathes and dedicates the rite to the release of the soul of the deceased from the company and region of sprites and its exaltation to the heaven of the good, after which the *kukshi-piṇḍa* is offered.

Office for cremation.—The fire is next applied by the nearest male relative to the wood at the feet of the corpse, if the deceased be a female, and to the wood at the head, if a male, with the *mantra* :—"*Oṃ* mayest thou arrive at the blissful abodes, thou with thy deeds whether done ill purposely or unwittingly hast become an inhabitant of another world, thy body encompassed with its load of desire and ignorance, weighted with its deeds of right and wrong has been completely resolved into its five elements." Then comes the *Tilamiśra-ájyáhuti* or *homa* with sesamum mingled with clarified butter accompanied by the mantra :—*Oṃ lomabhyaḥ sváhá, oṃ twache sváhá, oṃ lohitáya sváhá, oṃ máṃsebhyaḥ sváhá, oṃ medobhyaḥ svaha, oṃ tvagbhyaḥ sváhá, oṃ majjábhyaḥ sváhá, oṃ retase sváhá, oṃ roditebhyaḥ sváhá.*—'Hail salutation to the hair, epidermis, blood, * * marrow, skin, the essential element of the body, the semen, and to him who is bewailed.' Then follows the *sútra* directing the circumambulation of the pyre whilst sesamum* is sprinkled over the burning body with the *mantra* :—'*Oṃ*, glory to the fire of the funeral pyre.' When the body has been almost entirely consumed, a small portion of the flesh, about the size of a pigeon's egg, should be taken and tied up in a piece of cloth, and flung into a deep pool. Then the person who conducted the ceremony puts out the fire and bathes, anointing himself with the *pancha-gavya* and places a seat of *kuśa*-grass for the spirit of the deceased with a dedication followed by water, a *piṇḍa* and again water, each accompanied by its proper dedication.

Bali-dána.—Next the *bali-dána*, consisting of rice, sandal, &c., is offered to the goblins and sprites of the burning-ghát with the prayer that they will accept it, eat it and be appeased. Whoever wishes to preserve a portion of the bones, to cast them into the sacred stream of the

* The rich throw sandal, *tulsí*, sesamum and clarified butter on the pyre whilst the relatives cry out with a loud voice so as to attract the notice of the dweller in paradise.

Ganges at Hardwár (*phúl syavauna*), will collect them between his thumb and little finger and wash them in the *panchagavya* and clarified butte and placing them in a cloth bury them for a year before he attempts to carry out his purpose. All ceremonies performed for an ancestor must be carried through with the sacrificial thread over the right shoulder, all worship of the gods with the thread as usual over the left shoulder. The pyre is then cleaned and smeared with cow-dung whilst the dedication is made and water and a *piṇḍa* are given followed by water as before. Then the *mantra* is recited :—*Anádinidhano deva śankha-chakra-gadádhara ; akshayaḥ puṇḍaríkáksha preta-moksha-prado bhava.*—An address to the deity praying for the liberation of the soul of the deceased. A Bráhman repeats the *mantra* with his face towards the south ; a Kshatriya looking towards the north ; a Vaiśya to the east and a Śudra to the west, whilst the knot of the hair on the top of the head is unloosed. The sacrificial thread is then replaced and the *áchamanas* made. The thread is again put on the right shoulder (*apasavya*) whilst water is offered in the hollow of both hands to the manes of the deceased. The person who performs the rites bathes again before returning home and fasts for the rest of the day.

Ceremonies after cremation.—Lamps are kept lighting for the benefit of the manes for ten days after cremation either in a temple or under a *pípal* tree or where the obsequial ceremonies are performed, according to the rule :—*Tiláḥ pradeyáḥ páníyaṃ dipo deyaḥ śiválaye, jñátibhiḥ saha bhoktavyam, etat pretasya durlabham.*—Sesamum, water and lights should be provided in a temple of Śiva and meals should be taken with the relatives—for this has (now) become difficult to be obtained by a sprite. The place where the obsequial ceremonies (*kiriyá-karma*) subsequent to cremation take place is called the *ghát* or *bugra*. It is chosen, as a rule, near running water, but must not lie to the west of the house where the person for whom the rite is performed died. On the day following the cremation, the person who performed the principal part at the funeral pyre proceeds to the *ghát* and selecting a place, clears it and plasters it with mud and cow-dung. A fire-place is then built towards the northern part and on one side, an altar of white clay smeared with cow-dung. The lamp is next lighted with the dedication to enlightening the manes now in darkness so as to alleviate its sufferings. Then with top-knot unloosed the celebrant bathes on behalf of the manes with the usual definition, of place, time, person and object which is the performance of the ceremonies of the first day.

Tilatoyánjali.—Next the top-knot is tied up and the mouth is rinsed, after which he takes sesamum, water, *kuśa*-grass and barley and with his face towards the south offers them in the palms of both hands on be-

half of the manes with the usual dedication. The object declared is to allay the extremes of heat and thirst which the spirit must undergo and to perform the rites of the first day on its behalf. The ceremony known as the *tilatoyánjali* must be performed either thrice or once each day for the next ten days. Then rice* is boiled in a copper vessel and in it sesamum, *nágakeśara* (*Mesua ferrea*), honey and milk are placed and afterwards made into balls about the size of a *bel* fruit; these are offered with a dedication in the name of the deceased and the object that the spirit should obtain liberation and reach the abodes of the blessed after crossing the hell called *Raurava* and also that the head of the new body of the spirit may be formed correctly. Before actually offering the *piṇḍa*, the celebrant should stand in silence to the left of the fire-place, and place a *pavitra*† on the ground and on it a *karma-pátra* or sacrificial vessel and on the latter again a *pavitra*. The vessel should then be filled with water, sesamum and perfumes whilst the altar is covered with *kuśa*-grass. The celebrant next takes a *pavitra* and water in his hand and repeats the dedication as to laying the *kuśa* on the altar in the name of so and so deceased as a seat for his spirit. After this, water (*avánejana*) is poured on the altar with a similar dedication and then the *piṇḍa* is offered whilst the celebrant drops on his left knee and repeats the dedication already given. As already noticed, the object of the *piṇḍa* presented on the first day is to enable the spirit to cross the hell called Raurava and have a head for its new body. This is followed by an offering of water, one of very cold water, and one of sandal, rice, *bhinga-rája*‡ (*Eclipta prostrata*), flowers, incense, lamps and balls of rice and honey, each with its own proper dedication in the name of the manes. The thirteenth dedication is concerned with the consecration of the *karma-pátra* already mentioned. On the first day one *piṇḍa* is offered: on the second, two *piṇḍas*, &c., so that in ten days, fifty-five *piṇḍas* are offered each with the same ceremony as here given. Then comes the prayer that the *piṇḍas* already given may reach the manes, and the *karma-pátra* is turned upside down. The mouth is then rinsed with the usual formula and all the materials are thrown into the water with the *mantra*:§ —'Thou hast been burned in the fire of the pyre and hast become separate from thy brethren, bathe in this water and drink this milk thou

* Kshatriyas and all other than Bráhmans make the *piṇḍas* of barley-flour and also the illegitimate children of Bráhmans.

† See before.

‡ In Kumaon the *Cinnamomum Tamala* or *tejpát* is used.

§ *Chitánala, pradagdho'si parityakto'si bándhavaiḥ; idaṃ nîram idaṃ kshîram atra snâhi idaṃ piba; ákáśastho nirálambo váyubhûtaḥ samárditaḥ, atra snátvá idaṃ pîtvá snátvá pîtvá sukhî bhava.*

that dwellest in the ether without stay or support, troubled by storms and malignant spirits, bathe and drink here and having done so be happy.'

To the south of the fire-place a small earthen vessel known as a *karuwá* is filled with water in which *kuśa*, sesamum, barley and milk are placed and suspended from a tree, or if there be no tree, from a stake fixed in the ground with a tooth-brush of *nim* (*Melia indica*). Then bathing and putting on clean clothes, the celebrant returns home and when eating puts a portion of the food on a leaf-platter and leaves it with water either where four roads meet or on that side of the village which is nearest to the burning-ghát, both places being the favourite resorts of disembodied spirits. This portion called the *preta-grása* or spirits' mouthful is offered with the usual dedication to the name of the deceased.

Ceremonies of the first ten days.—The proceedings of each day are the same, the only difference being the object of the *piṇḍa*. The following list of the hells crossed before reaching paradise and the different parts of the new body of the spirit affected by each day's ceremony will suffice :—

Day.	**Hell met with.*	*Portions of the new body formed.*
First ...	Raurava ...	Head.
Second ...	Yonipaṛṣaka ...	Eyes, ears and nose.
Third ...	Maháraurava ...	Arms, chest, neck and members of the mouth.
Fourth ...	Támisra ...	Pubic region, penis, void and parts around.
Fifth ...	Andhatámisra ...	Thighs and legs.
Sixth ...	Sambhrama ...	Feet and toes.
Seventh ...	Amedhya-krimi-púrṇa ...	Bones, marrow and brain.
Eighth ...	Purisha bhakshaṇa ...	Nails and hair.
Ninth ...	Svamáṃsa bhakshaṇa ...	Testes and semen.
Tenth ...	Kumbhípáka ...	To avoid the wants of the senses.

Tenth day.—The new body having been formed the natural wants of a living body are presupposed and the ceremony of the tenth day is devoted to removing the sensation of hunger, thirst, &c., from the new body. On the same day the clothes of the celebrant are steeped in cow's urine with soapnuts and washed, the walls of the house are plastered, all metal vessels are thoroughly cleaned, the fire-place at the ghát is broken and an *anjali* of water is offered to the ether for the sake of the manes and to assuage its thirst. The celebrant then moves up the stream above the *ghát* and with his near relatives shaves and bathes and all present an *anjali* of water as before. Bathing again all proceed homewards,† having been sprinkled with the *pancha-gavya*. The follow-

* Most of the names of hell occur in the law-books or the Puráṇas. The first, third, fourth and fifth in Manu, IV. 88: the tenth in the Bhágavata-puráṇa, and the remainder in the Skanda-puráṇa.

† It is the custom to offer one more *piṇḍa* on the road homewards called the *pátheyaśráddha*, but this is usually made of uncooked flour and water.

ing rule lays down the period necessary for purification :—*Bráhmaṇo daśarátreṇa dwádaśáhena bhúmipaḥ ; vaiśyaḥ panchadaśáhena śúdro másena śudhyati.* "The Brahman becomes pure in ten days, the Kshatriya in twelve days, the Vaiśya in fifteen days and the Sudra in a month".

Ceremonies of the eleventh day.—After the usual domestic prayers, on the eleventh day the figures of Lakshmí and Náráyaṇa are worshipped and a covering spread for them on the chárpái of the deceased and a cow offered in his name as *kapilá-dána*. Next vessels of water (*Udaka-kumbha*) are filled and food prepared in the name of the deceased. A bullock is also branded on the flanks with the trident and discus and struck three times with the hand and then let go,* followed by the *ekádaśáha śráddha*. The palm of the hand represents three *tírthas :* the *Brahma-tírtha* is the hollow at the wrist through which the rinsing of the mouth is effected ; the *Deva-tírtha* is between the fingers sloping downwards and is used in offering water to the gods, and the *Pitṛi-tírtha* is the hollow between the thumb and first finger through which the water flows when offered to ancestors. For instance, in the worship of Lakshmi-Náráyaṇa, the water is presented through the *Deva-tírtha*. First the covering is placed on the chárpái and on it the images with a dedication to the sure admission into paradise of the manes, and for this purpose the figures of the deities Lakshmí and Náráyaṇa are worshipped. The installation hymn to the deities then follows and offerings of rice, water, sandal, flowers, incense, lamps and wearing apparel are made. To this succeeds the *dhyána* or meditation in honour of Vishṇu, who has in his right hand the lotus, in his left the conch, &c. ; then come appropriate gifts, according to the ability of the donor, which eventually become the property of a Bráhman with the prayer that as S'iva and Kṛishṇa live in happiness and comfort, so may the deceased abide, and for this purpose all these good things have been provided. The *purohita* then lies down on the couch for a short time and so sanctifies the gifts that have been made whilst the verse is read : —*Yasya smṛityá cha námoktyá tapoyajṇakriyádishu nyúnaṃ sampúrṇatáṃ yáti sadyo vande tam achyutam.*—'That Achyuta through whose remembrance and invocation the shortcomings of my religious observances are supplemented, Him do I now adore.'

Gifts of a cow.—Next comes the *kapilá-dána* as before with the dedication :—'O Kapilá worshipped of all the four castes, best, containing all places of pilgrimages and deities alleviate my trouble.' The water vessels are next presented and there should be one for every day in the year and each should be accompanied by food and lights for the same period for the benefit of the spirit of the deceased† and then given

* As a rule, however, this is a mere form and the irons are not heated.

† As a rule the poor can only afford one.

to Bráhmans with the verse:—'*Yasya*, &c.,' as in the preceding pargraph.

The scape-bullock.—The loosing of the scape-bullock (*vṛishotsarga*) is seldom observed in Kumaon, though the ritual for it is given. First an altar is erected of earth and the fire is lighted thereon and Agni is installed and worshipped. The altar is then dedicated to the rite of the *pradhána-homa*. This homa is begun by throwing clarified butter into the fire with the mantra:—*Oṃ iha ratis sváhá idaṃ agnaye, oṃ iha ramadhvaṃ sváhá idam agnaye, oṃ iha dhṛitis sváhá idam agnaye, oṃ svadhṛitis svâhâ idam agnaye, oṃ iha ramasva sváhá idam agnaye*; and again *Oṃ prajápataye, indráya, agnaye, somáya sváhá*. Next curdled milk is thrown on the fire and the eight gods are saluted:—Agni, Rudra, Sarva, Paśupati, Ugra, Íśána, Bhava, and Mahádeva, all old names. Then comes the *Paushṇacharu-homa* or oblation of rice barley and pulse boiled in milk and clarified butter and presented with the mantra:—*Oṃ púshágá anvetu naḥ púshá rakshasva sarvataḥ, púshá váján sanotu naḥ sváhá*; and again *Oṃ agnaye svishṭakṛite sváhá, oṃ bhú sváhá, oṃ bhuvaḥ sváhá, oṃ svaḥ sváhá*. In these *mantras* the ancient deities Púshan and Agni are invoked. A bell is then suspended from the neck of the bullock and small bells are tied round its feet, and it is told that it is to be let go in order to save the spirit of the deceased from the torments of hell. The following mantra is then whispered it its ear:—*Vishṇur hi bhagaván dharmaḥ chatushpádaḥ prakírtitaḥ, vṛiṇomi tam ahaṃ bhaktyá sa mám rakshatu sarvadá*. Then follows the verse:—'*Oṃ ṛitaṃ cha*, &c.,' as in the *sandhyá*. The bullock is addressed as the fourfooted representative of the Supreme and asked to preserve for ever his votary. The *bail-gáyatrí* is then recited:—*Om tíkshṇaśṛingáya vidmahe vedapáśáya dhímahi tan no vṛishabhaḥ prachodayát*. Sesamum, *kuśa*, barley and water are taken in the hand and also the bullock's tail, whilst water is poured over all with the mantra:*—'To fathers, mothers and relations both by the mother's and father's side, to the *purohita*, wife's relations and those who have died without rites and who have not had the subsequent obsequial ceremonies performed, may salvation arise by means of the unloosing of this bullock.' The bullock will then be loosed with a dedication. The right quarter is sometimes branded with a trident and the left with a discus and the animal becomes the property of some of the low-caste people in the village.

Ekádaśáha-śráddha.—The *ekádaśáha-śráddha* commences with a bath-

* *Om svadhá pitṛibhyo mátṛibhyo bandhubhyaś cha tṛiptaye, mátṛipakshás cha ye kechit ye kechit pitṛipakshajáḥ, guruśvaśurabandhúnám ye chánye kulasambhaváḥ, ye pretabhávam ápannáḥ ye chánye śráddhavarjitáḥ vṛishotsargeṇa te sarve labhantám tṛiptim uttamám.*

ing and dedication to the first *śráddha* in honour of the deceased. Hitherto only the ceremonies known as *kiriya-karma* have been performed whilst the spirit of the deceased remained a *pret*, but now in order that he may be numbered amongst the *pitṛis* or ancestors, the formal *śráddha* is undertaken in his honour and for his benefit. Dry, clean clothes are worn and the celebrant proceeds to the *ghát* and rinses his mouth with the usual formula. Then rice is cooked and five small bundles of *kuśa* are washed and anointed with oil and set up to represent the Bráhman on the part of the deceased with the *nimantrana* or invitation :—*Gato'si divyaloke tvaṃ kritántavihitát pathaḥ, manasá váyubhútena vipre tváhaṃ nimantraye*— you have departed to be away having your way prepared by the god of death with a mind turned into wind. I would invite you. Similar bundles are consecrated to represent the spirit of the deceased and water and the *argha* are offered with the prayer that they may be accepted. In silence the *karmapátra* is placed on the ground and offerings of sandal, &c., made as before.* The dedication is then made for the purpose of performing the ceremony as if it were the *ekoddishṭa-śráddha*.† For this purpose a seat is placed and the *argha* is consecrated and dedicated to the spirit of the deceased. Gifts are then presented to both the symbolised Bráhman and *preta* and both are reverenced. A brazen platter is then smeared with clarified butter and the rice placed on it and dedicated to the acceptance of the spirit. A circular altar a span in diameter is next made and smeared with cow-dung. Rice is also mixed with milk, sesamum, clarified butter, and honey and made into round balls about the size of a *bel* fruit and with *kuśa*, sesamum and water are taken in the hand and dedicated to the first *śráddha*. The altar is covered with *kuśa* and on it a single *piṇḍa* is placed, then water, sandal, rice, flowers, incense, lamps, sweetmeats and woollen thread are each presented with a dedication as offerings to the spirit of the deceased. The bundles of *kuśa* which represent the Bráhman are then addressed and told that the preceding offerings have been made to the *preta* and to grant that they may be accepted and for this purpose water is offered to him. Gifts are then made to the symbolised Bráhman which are kept until the next day, as gifts made during the first eleven days cannot be accepted by a *purohita*. The water in the *karm-pátra* is then poured out at the feet of the Bráhman and the *janeo* is changed to the left shoulder. This is followed

* See previous page.

† The *ekoddishṭa* or *tithi-śráddha* is that performed on the anniversary of a father's death, whilst the general ceremony which takes place during the dark half of Kuár is called the *párvan* or *kanyágata-śráddha*. If the father dies during this part of Kuár the ceremony is called *Kshayáha-śráddha*. In the *párvan* the usual fifty-five piṇḍas are offered ; in the *ekoddishṭa* only one.

by the usual rinsing of the mouth, after which the verse commencing :—' *Yasya*, &c.' is recited.

Ceremony of the twelfth day.—On the twelfth day the ceremony known as *Sapindi* takes place. The celebrant goes to the *ghát* as before and commences with bathing and dedication to the day's rite. He then makes three altars of the same dimensions as before : to the north, a square altar called the *Viśvadeva-bedi :* to the south, a triangular altar called *Preta-bedi*, and to the east a circular altar calldd the *Pitámahádi-bedi*. Rice is then cooked and whilst it is being made ready, two Bráhmans are formed from *kuśa*-grass and placed at the northern altar as in the preceding ceremony with a formal invitation, during which barley is sprinkled over them whilst they are asked to take part in the *sapindi*. The following verse is then repeated :—*Akrodhanaiḥ sauchaparaiḥ satataṃ brahmacháribhiḥ, bhavitavyaṃ bhavadbhiś cha mayá cha śráddhakáriṇá, sarváyása-vinirmuktaiḥ kámakrodhavivarjitaiḥ.* Then the southern altar is approached and there the bundles of *kuśa* representing the deceased are placed. These are addressed as above with the verse—' *Gato'si*, &c.,' to which is added the line :—*Pújayishyámi bhogena devavipraṃ nimantraye.* Then follows the changing of the sacrificial thread to the left shoulder and purification by rinsing the mouth before approaching the eastern altar. This is consecrated to the ancestors of the deceased for three generations in the male line, all of whom are named and represented by blades of *kuśa*-grass. If a mother is the subject of the ceremony the names of the father's mother, grandfather's mother, &c., are given here. Next the wife's ancestors for three generations in the male line are invited and some one accepts on behalf of all and their feet are washed with the mantra :—' *Akrodhanaiḥ*, &c.' This also takes place at the other two altars and is followed by the celebrant taking the *pavitra* or knot of *kuśa* and sticking it into the folds of his waist-cloth (*nívi-bandhana*). Each of the altars in order are again visited and a dedication is made to the *kuśa* representatives at each with the *argha*, seat, invitation, sandal, rice, flowers, incense, lights, apparel, betel and a stone on which the rice is placed for making the *piṇḍas*. The placing the stone and rice at the northern altar has the special mantra :—*Om agnaye kavya-váhanáya svádhá idam agnaye, om somáya pitṛimate svadhá idaṃ somáya.* At the southern altar the celebrant merely mentions the name of the deceased and that for him the food has been prepared, and at the eastern altar the stone and food are dedicated to the *pitṛis* who are named as before. The remaining rice is placed on another stone and mixed with honey, clarified butter and sesamum is divided into four *piṇḍas*. A small portion of rice is then taken with a blade of *kuśa* in the right hand and the hand is closed over the rice whilst this verse is recited :—*Asaṃskṛita*

pramítánám tyáginám kulabháginám uchchhishṭa-bhágadheyánám darbheshu vikirásanam. It is then cast on the ground near the *piṇḍas* and is called the *bikira-dán.*

Then kneeling on the left knee with *janeo* reversed a *piṇḍa* is taken with *kuśa*, sesamum and water in the name of the father of the deceased with the prayer that the earth here may be holy as Gya, the water like that of the Ganges, and the *piṇḍa* be like *amṛita*, and is placed on the altar. Similarly a *piṇḍa* is taken and dedicated to the grandfather and great-grandfather of the deceased respectively. The last is dedicated to the spirit of the deceased that he may cease to be a disembodied spirit and become enrolled amongst the ancestors. Next follows the usual gifts with dedication. The celebrant next divides the *piṇḍa* of the deceased into three parts with a golden skewer and attaches one part to each of the *piṇḍas* of the ancestors with the mantra :—*Ye samánáḥ samanasaḥ pitaro yamarájye, teshám lokaḥ svadhá namo deveshu kalpatám, ye samánáḥ samanaso jívá jíveshu mámakáḥ, teshám śrír mayi kalpatám asmin loke śataṃ samáḥ.* The spirit thus becomes an ancestor and ousts his great-grandfather in the line of the *párvaṇa.* Water is then presented and the *pavitra* is thrown away ; rice is next sprinkled over the three *piṇḍas* with the *mantra* :—*Oṃ namo vaḥ pitaro rasáya namo vaḥ pitaro jíváya namo vaḥ pitaro sukháya namo vaḥ pitaraḥ pitaro namo vo gṛiháṇa pitaro dattaṃ sado vaḥ pitaro pitaro vásaḥ.* The same *mantra* is repeated whilst laying three threads on the *piṇḍas* to represent their *jaṇeos.* Next water, sesamum and *kuśa* are presented with a dedication. Milk is then poured through the hand over the *piṇḍas* whilst the preceding *mantra* is repeated. All now march round the altar whilst the celebrant recites the *mantra:—A'mávájasya prasavo jagamyáṃ deve dyávápṛithiví viśvarúpe ámá gantám pitarámátará chárṇá somo amṛitatve jagamyám.* Then the celebrant gives himself the *tilaka* with the *mantra :—Oṃ pitṛibhyaḥ svadhá ebhyaḥ svadhá namaḥ pitámahebhyah svadhá ebhyaḥ svadhá namaḥ prapitámahebhyaḥ svadhá ebhyaḥ svadhá namaḥ akshaṇa pitaro mímadanta pitaro 'titṛipanta pitaraḥ pitaraḥ sundadhvam.* Next the *áśis* or benediction occurs in which with hands clasped the celebrant prays for the increase in prosperity of his family, their defence in time of trouble, &c. The *piṇḍa* of the father is then removed from the altar and in its place the figures of a conch, discus, &c., are drawn with sandal and on them a lighted lamp is placed and saluted whilst rice is sprinkled over it. The *mantra* used is :—*Oṃ vasantáya namaḥ, oṃ grishmáya namaḥ, oṃ varshábhyo namaḥ, oṃ śarade namaḥ, oṃ hemantáya namaḥ, oṃ śiśiráya namaḥ*—forming an address to the seasons. The *piṇḍa* is then restored to its place on the altar and the bundle of *kuśa* which represents the Bráhmans at the northern altar is opened out and one stalk is thrown

towards the heavens whilst saying :—' Praise to the ancestors in paradise.' Then follows the verses :—" *Sapta vyádhá daśárṇeshu*," *&c.*, as in the termination of the *Nándi-śráddha*, after which the materials for the ceremony are removed and gifts again made to Bráhmans. Next the celebrant proceeds to a *pípal* tree, or if no such tree be near a branch is brought from a tree and a dedication is made in the name of Vishṇu of three hundred and sixty vessels of water which is poured over the tree and then the tree is tied round with thread three times and whilst moving round, the following *mantra* is repeated :—" Glory to thee O king of trees whose root is like Brahmá, trunk Vishṇu and top like S'iva." The ceremony concludes with the usual gifts and dedication.

Monthly ceremony.—On every monthly return of the date on which a father dies a single *piṇḍa* is offered to his manes as before with a vessel of water to the *pípal* tree. This continues for eleven months and in the twelfth month the *Hárshika-śráddha* takes place which is in all respects the same as the *Ekoddishṭá-ṣráddha* already described. The *Náráyaṇa-bali* is offered when a father dies in a strange land and his relatives cannot find his body to perform the usual rites. A figure of the deceased is made of the reed *kans*, and placed on a funeral pyre and burned with the dedication that the deceased may not be without the benefit of funeral rites Then the *kalaśa* is consecrated and the forms of Brahmá, Vishṇu, S'iva and Yama stamped on pieces of metal are placed on the covering of the *kalaśa* and are worshipped with the *Purusha-súkta mantra* from the Ṛig-veda (*Maṇ.* 10, 90). Then sixteen *homas* and ten *piṇḍas* are offered with the usual dedication and the latter are thrown into the water. Sixteen offerings of water from both hands *(anjali)* conclude the ceremony. A separate ritual is prescribed for a woman dying whilst in her courses or dying in child-birth. The body is anointed with the *pancha-gavya* and sprinkled with water whilst the *mantra*—' *Apohishṭa*, &c.,' is recited. The body is then taken and a small quantity of fire placed on the chest after which it is either buried or thrown into flowing water. For eight days nothing is done, but on the ninth day, forty-five *piṇḍas* are given and the ceremonies of the remaining three days as already described are carried through if the people can afford it. There is also a separate ritual for persons who have joined a celibate fraternity as a Jogi, Gosáin, &c. His staff and clothes are placed on the chárpái as in the case of an ordinary person and the *arka-viváha* or marriage with the plant *madár* takes place, after which a *piṇḍa* is offered in his name. *Fakirs*, lepers and women who die in child-birth are buried in Kumaon. It is believed that if any one dies during the Dhanishṭhá, Satabhishá, Púrvabhádá, Uttarabhádá or Revatí *nakshatras* or lunar-mansions, four others of his family will certainly die, and for the avoidance of this evil a *śánti* or preventive

service is prescribed which must be held by the relatives and be accompanied by numerous gifts.

Bhojana-karma.—The observances connected with the preparation and cooking of food are classed amongst the domestic ceremonies and are known as *Balivaiśvadeva*. After the food has been cooked and before it is eaten, the person takes a small portion of it in his right hand and offers it as a *homa* on the fire whilst repeating the mantra* :—*Oṃ* salutation to Agni, the vital air *práṇa ; oṃ* salutation to Váyu, the vital air *apána ; oṃ* salutation to Aditya, the vital air *vyána ;* salutation to the same three deities, the same three vital airs ; salutation to him who is fire produced from water, juicy nectar, Brahmá, &c. The *gáyatrí*-mantra† with the addition of the term *sváhá* after each section is then repeated as often as the person wishes. The *homa* or burnt-offering can only be made where the person can procure some clarified butter, where it cannot be obtained the *homa* must be omitted. Water is then taken in the hand aud poured on the ground whilst the mantra‡ is repeated :—' If whoever eats remembers that Brahmá, Vishṇu aud S'iva are present in the food impurity cannot accrue from eating.' Where the water has fallen four small portions§ of the food are thrown one after the other with the following mantra :—' *Oṃ*, glory to the lord of the earth ; *oṃ*, glory to the lord of created things ; *oṃ*, glory, glory to the lord of sprites ; *oṃ*, glory to all beings.' Water is again taken in the hand whilst a mystical *mantra*‖ is recited. The water is then drank. Next about a mouthful of the food is taken in the hand and thrown away as the portion of dogs, low-caste persons, deceased,

* *Oṃ bhúr agnaye práṇáya sváhá oṃ bhuvar váyave apáṇáya sváhá oṃ svar ádityáya vyánáya sváhá oṃ bhúr bhuvaḥ svaḥ agniváyvádityebhyaḥ práṇápánavyánebhyaḥ sváhá oṃ ápo jyoti raso' mritaṃ brahma bhúr bhuvaḥ svaḥ oṃ sarvan, vai púrṇaṃ sváhá.* Here the three kinds of vital airs are mentioned : *práṇa*, that which issues from the lungs ; *apána*, from the anus and *vyána* that which circulates through the body. The usual number is, however, five and hereafter we have added, *samána*-that which is common to the whole body, and *udána*, that which rises through the throat to the head. *Sváhá* has the meaning probably of a good oblation or offering, and is here used with the mystical *vyáhṛiti* mantra.

† See previous page.

‡ The learned use the mantra :—*Oṃ nábhyá asíd antarikshaṃ śír[illegible]so dyauḥ samavarttata padbhyáṃ bhúmir diśaḥ śrotrát tathá lokán akalpayan.* The verse translated above is, however, far more common and runs :—*Annaṃ brahmá raso vishṇuḥ bhoktá devo maheśvaraḥ evaṃ dhyátvá dvijo bhunkte annadosho na díyate.* The ordinary cultivator seldom uses more than the three last words—' *annadosho na díyate.*'

§ *Oṃ bhúpataye namaḥ oṃ bhuvanapataye namaḥ oṃ bhútánáṃ pataye namaḥ oṃ sarvebhyo bhútebhyo balaye namaḥ.*

‖ *Oṃ antaścharasi bhúteshu guhávyáṃ viśvatomukhaḥ tvaṃ yajñaḥ tvaṃ vashaṭkáraḥ ápo jyoti raso'mritaṃ sváhá.* The word *vashat* is an exclamation used in making oblations and *vashatkára* is the making it.

crows and ants.* The correct custom is to make one offering for each of these six classes whilst repeating the mantra, but in practice a very small portion is placed on the ground with the ejaculation :—'*Oṃ*, glory to Vishṇu.' The food is then eaten whilst with the first five mouthfuls (*páncha-grási*) the following mantra is recited mentally :—*Oṃ*, salutation to the five kinds of vital air, *viz.*, *práṇa*, *apána*, *samána*, *vyána* and *udána*.' Then a little water is poured over the *bali* with the mantra :—*Oṃ* salutation to the *bali*,' and at the end of the meal the same is repeated with the verse† : 'May the giver of the meal have long-life and the eater thereof ever be happy.'‡

The battle of Kanarpí Ghát, edited and translated by S'RÍ NÁRÁYAṆ SINGH, *and* G. A. GRIERSON.

INTRODUCTION.

The following poem, written by a Maithil Bráhman at the end of the last century, in the Baiswárí dialect, is perhaps the most popular of its kind in Tirhut. A copy of it in MS. can be obtained in almost any large village in Darbhangá. Owing, however, to the complexity of some of the metres, they are generally very corrupt. Bábú S'rí Náráyaṇ Singh, of Jogiyárá, has joined me in endeavouring to prepare a translation and fairly correct edition of the text.

The poem describes a victory won by Narendra Singh, an ancestor of the present Mahárájdarbhangá over Rám Náráyan Bhúp, the well-known Súbá of Bihár.§ The following is the genealogy of the present Mahárájdarbhangá :

Mahárájdarbhangá Narendra Singh.
„ Pratáp Singh.
„ Rághab Singh.
„ Mádhab Singh.
„ Chhatra Singh.
„ Maheśwar Singh.
„ Lakshmíśwar Singh, the present holder of the title.

The Baksí or Bakhshí mentioned in Dohá 5, line 9, and Dohá 19, l. 1, was Gokul Náth Jhá, of Ḍhangá, Haripúr, Pargana Jarail, in the

* *Sunáṃ cha patitánáṃ cha śvapachám páparoginám, váyasánám kriminám cha sahatair nirvapet bhuvaḥ.*

† *Annadátá chiranjívi annabhoktá sadá sukhí.*

‡ [The reading of some of the mantras was too corrupt to admit of thorough correction.—ED.]

§ See note to verse 1 of the translation.

Darbhangá District. His great-grandson Márkáṇḍe Jhá, is the Bakhshí to the present Mahárájˌ as follows :

Gokul Náth Jhá.
Sáče Jhá.
Mohan Lál Jhá.
Márkáṇḍe Jhá.

The Sarb Ján Jhá mentioned in Chhand 6, l. 7, was a famous prophet, who knew everything. A story of him is told that his servant once accidentally threw away his Narbadeśwar (an image of Síváˌ). Shortly afterwards Sarb Ján missed it, and declared that it had been eaten up by one of his ducks. All the ducks were brought before him, and he picked out one, which was killed. In its crop was found the missing image.

The poem is full of names of persons and places of whom and which little or nothing is at present known.

Narendra Singh is the most celebrated. Of him the poet Chandra Jhá, says in his Maithil Rámáyan,

त्रिपति नरेन्द्र सिङ्घ भेल जखन ।
अरि घर कानन पसरल तखन ॥
ताकि ताकि सत्रुक सङ्हार ।
कैलन्हि बऊत क्षात्र व्यवहार ॥
कतऊँ जुद्धि नहिँ ऐलाह हारि ।
अतिसय तेज तनिक तरुआरि ॥

'When Narendra Singh became king, weeping filled his enemies' houses. He searched for and became a destroyer of his foes, and performed many chivalrous actions. Nowhere did he lose a battle, and his sword was very sharp.'

The other names recorded will, if they can be identified, be useful to students of history of the last century.

The author of the poem, Lál Jhá, a bráhmaṇ, lived in Mangrauní Pargana Hátí, Darbhangá District. His great-grandson is now alive in the same village. The family still owns the village of Kanail which was given to the poet by Narendra Singh.

The metres employed in the poem are the Dohá (Nos. 1, 3, 5, 7, 10, 12, 14, 16, 18, 20, 23, and 25), the Bhujangaprayát (Nos. 2, 6, 11, 17, 19, 21, and 24), the Narách (Nos. 4, 15, and 22), the Tribhangí (Nos. 8 and 13), and the Pádákulak (No. 9).

The Dohá is well-known, and need not be described at length. The following Prákrit lines describe it, and are current in Mithilá :

तेरह मत्रा पढम पइ, पुण एगारह देह ।
पुण तेरह एगारहहिँ, दोहा लक्खण एह ॥

'Put thirteen instants in the first half-stanza, and eleven in the second, then again thirteen and eleven, and this is the description of the dohá.' The above is itself an example of the metre.

The Bhujangaprayát, which closely corresponds to the Hansagati Chhand described in Kellogg's prosody, p. 22, consists of four Bacchics (∪ — —), called यगण or य in Indian prosody. The rule current concerning this metre is भुजङ्गप्रयात भवैश्चतुर्भिः.

The Narách consists of eight Iambics (∪ —), ध्वज or लग in Indian prosody. The following Prákrit verses are examples of the metre, and at the same time give the rule for its formation.

लह्ह गुरू निरंतरा, प्रमाण अट्ठ अक्खरा ।
प्रमाण दूण किज्जिए, णराउ सेा भणिज्जिए ॥

'A Pramáṇiká verse consists of eight syllables, a long and a short one alternately. Double the Pramáṇiká and it becomes the Narách.'

The Tribhangí Chhand consists of 32 instants, divided into 10 + 8 + 8 + 6 instants. It is described in Kellogg's prosody, p. 23. Each line must end with a long syllable. The following Prákrit example gives the rule :

पढमं दह रहणं अट्ठवि रहणं पुण वसु रहणं रस रहणं ।
अंते गुरु सेाहइ त्रिऊअण मोहइ सिद्धि सरोहे वर तरुणं ॥
जइ पलइ पयोहरु किमिअ मणोहरु हणइ तहाँ णायक्क गुणी ।
तिरिभंगी छंदं सुक्खाणंदं भणइ फणिंदो विमल मई ॥

'First stop on the tenth instant, then on the eighth, then again on the eighth and on the sixth. The last letter of the line must be long. The wise Phaṇíndra says that this verse if in proper form enchants the three worlds, accomplishes the objects of full grown youths, and creates happiness. But if it is not so, it is like a damsel with pendulous bosom, annoying to her lord.'

The Pádákulak consists of 64 instants, divided into four quarter-verses of 6 + 4 + 4 + 2 instants each. The last syllables of the second and fourth quarters must be long. G. A. G.

अथ कनरपी घाट लड़ाइ ।

॥ १ ॥ दोहा ।

राम नरायन भूप तें कह्यौ मुखालिफ जाय ।
हाकिम को मिथिलेश ने दीन्हो अदल उठाय ॥
सीर करो तिरहुति को ता के रची उपाय ।
फौजदार मछथा भए सङ्ग सलाबति राय ॥
बखत सिङ्ह कुल उजरन रोड़ मल्ल दिल पूर ।
चौभान भानु भानु सुकुल एक एक तें सूर ॥
याही सभ तैनाथ करि फौजे पाँच हजार ।
दिगसुल सन्मुख जोगिनी मछथा उतरे पार ॥ १ ॥

॥ २ ॥ छन्द भुजङ्गप्रयात ।

चले फौज नाजिम को बाजत नगारे ।
सभें खुल गए तोपखाने सकारे ॥
घटा गज के ऊपर सों गाजत निशानैं ।
जजायिल धमक्का लसैं चन्द्रबानैं ॥
अही धर मही कोल दिक्पाल कम्पैं ।
उड़े गर्द अम्बर भरे सूर झम्पैं ॥
दमामा नफीरी औ कर्नाल बोलैं ।
बड़े दलदले रे सभे दीप डोलैं ॥
खड़ैतैं खड़े खूब खामिन के आगैं ।
बड़े रङ्ग तें जङ्ग के जोर पागैं ॥
बड़े मोद ले खुल गए द्वार आवैं ।
जो पक्खर लिए पैख सैयद सवारे ॥
जो आगे छड़ीबान के दल बिराजैं ।
बरच्छा के छाहैं किए रङ्ग साजैं ॥
चलो जी शिताबी लगी दूर जाना ।
लदे साथ छकड़ मैं केते खजाना ॥

बड़ो दाप तें कूच दर कूच आवैं ।
कहाँ सान को नाहि मघवान पावैं ॥
सभैं तो पटी बान्हि कम्मर जड़ावा ।
पुछे राह में दूर केते भवाड़ा ॥ २ ॥

॥ ३ ॥ दोहा ।

खबरदार ने खबरि करि त्रिप सैं कह्यउ बुझाय ।
पाँच हजार सवार लै महथा पऊँचे आय ॥
त्रिपति बोलाए ज्योतखी कीजै कोटि बिचार
इहाँ तो लड़ना है नहीं बड़ी बलान के पार ॥
भूप मसूरति सकल करि बाहिर बैठे आय ।
कीजे फौज तयार तू कह्यौ नकीब बोलाय ॥ ३ ॥

॥ ४ ॥ छन्द नराच ।

कह्यौ नकीब धाय धाय फौज बीच जाय कै ।
तयार हो बहादुरो सभे सिलाह लाय कै ॥
तयार होन को लगे जमातिदार गज्जई ।
दसो दिसा अनोर सोर घोर बम्ब बज्जई ॥
कहूँ कमान बान सान भाँति भाँति देखिए ।
निदान माँ मैदान बीच भीम से बिसेखिए ॥
चले महा बली तयार होय भान भान सैं ।
तुरङ्ग छेड़ छाड़ में तुलै न पौन गौन तें ॥ ४ ॥

॥ ५ ॥ दोहा ।

खारिआत दै सभनि को करि के बिबिध बिलास ।
चले सिपाह महा बली मिथिला पति के पास ॥
दारपाल भूपाल तैं अर्ज कियो है जाय ।
दालवन्द तैयार ह्वै हाजिर पऊँचे आय ॥
एक एक करि मेजरा सभ को लीन्ह सलाम ।
लाल महा कवि बैठि गो तहाँ जहाँ सुख धाम ॥
दच्छिन बैठे त्रिपति को बाबू और दिमान ।
उत्तर ओझा बैठि गो साथ लिए मतिमान ॥

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पच्छिम सकल सिपाह गन बकसी बैठे पास ।
बने बनाए देखिए पीछे खास खवास ॥
रैनि दिबस हाजिर रहै रतन रतन सो जान ।
मोतसदी तलिका करै तोपा बान कमान ॥
बैठे सभ के बीच मैं महाराज नरइन्द्र ।
सोभा बरनो जात नहिं ज्यों तारन मैं चन्द्र ॥ ५ ॥

॥ ६ ॥ छन्द भुजङ्गप्रयात ।

सुपण्डित कहूँ पच्छ रच्छा सँभारैं ।
कहूँ चारु बैदिक पढ़ै बेद सारैं ॥
कहूँ ज्योतखी सो घड़ी नेक साधैं ।
कहूँ आगमी यन्त्र के मन्त्र लाधैं ॥
कबीस्वर लगैं सो कड़ाखा बनावैं ।
कहूँ भाँट बैठे कबित्यैं सुनावैं ॥
कहूँ सर्ब जानै कहैं सर्ब जाने ।
कहूँ कोख साहित्य हूँ को बखाने ॥
कहूँ मोलना सैं करैं बेत बातैं ।
कहूँ मोनसी पारसी रङ्ग रातैं ॥
कहूँ बल्लभी सो दही हार लावैं ।
लिए गागरी नागरी रङ्ग लावैं ॥ ६ ॥

॥ ७ ॥ दोहा ।

राज सभा रजपूत गन बरनत हैं कबि लाल ।
बैठे नृप चऊ ओर सैं लिए ढाल तलवाल ॥ ७ ॥

॥ ८ ॥ छन्द चिभङ्गी ।

राउत रजपूतैं सभैं सपूतैं लखि पुरहूते सबल डरैं ।
सुर बैस बुनेला बीर चनेला लसैं बघेला खड़ग धरैं ॥
चौहान बिसेना सब्बर सेना रायठौर दल बीर भरैं ।
हाड़ा कछवाहा लाय सिलाहा हा हा करि कैं झूकि परैं ॥
दब्बै अरिदम्भा जाति निकुम्भा औ गन्धवरिया सूर भला ।
सँगर परिवाहा हैहरवाहा हैहयबन्सी भीम भला ॥

गौतम बिजहरिया औ सरबरिया रघुबन्सी नरनाह कला ।
गौड़ा बछगोती सुजस सुमेती गहड़वार निज साजि दला ॥
सिरमोरक कन्दा कौसिक चन्दा बड़गैयाँ करचोउलिया ।
जो सगरवार सरदार सिपाही गोड़ अमेठी चौघरिया ॥
तोमर गहनौता गुजर समेता रानाबन्सी सिधौटिया ।
मौनस बिजहरिया न्रिप नगपुरिया बड़ महरौड़ी सतौड़िया ॥ ८ ॥

॥ ९ ॥ छन्द पादाकुलक ।

करम्बार पम्मार कठेला कटहरिया सुरनेक सिपाही ।
तँह लाल महा कबि जान महा छबि अरि गन सीर में असी वाही ॥ ९ ॥

॥ १० ॥ दोहा ।

तुङ्ग तुरङ्गम तरल गति प्रबल जङ्घ में जोर ।
ले ले आवत खेलि कै गहैं बाग की डोर ॥ १० ॥

॥ ११ ॥ छन्द भुजङ्गप्रयात ।

तुरकी अरब्बी इराकी सु कच्छी ।
दरायी खन्नारी जितैं मीन लच्छी ॥
चलै तेज ताजी सुजन्नस पिठानी ।
करै चारु बाजी कहाँ लौ बखानी ॥
भलो चारु कम्बोज अम्बू बनाई ।
मनो धार पारा धरै चञ्चलाई ॥
तुरङ्गा सुरङ्गा लसैं मीन रङ्गा ।
पिलङ्गा सबै सों महा नील रङ्गा ॥
जरद्दा मुसुकी समुन्दा छबीला ।
हराबोज सबजा ओ लीला ओ तीला ॥
सुरक्खाऽबलक्खा मनो बायु सक्खा ।
सु उचैस्सवा को दले दर्प्प देखा ॥
खड़े पच्छ कल्यान कल्यान कारी ।
कपोतच्छबी ज्यों चितेरे समारी ॥
हजारैं हजारैं लगे हेम तारैं ।
चुनी से जड़ी जीन पट्टा समारैं ॥ ११ ॥

॥ १२ ॥ दोहा ।

सबैं सिपाह सलाम करि चढ़्यौ तुरङ्गम खास ।
किल्लाङ्ह तें मिसि लगी कमला जी के पास ॥
क्षेमङ्करिनि निहारि नभ भौ बिकसित मुख चन्द्र ।
लम्बोदर बिघ्नेस कहि बहराए नरइन्द्र ॥
मच्छ पुच्छ के तिलक करि पैन्ह कुसुम के माल ।
कै प्रनाम बिघ्नेस कैं बहराने भूपाल ॥ १२ ॥

॥ १३ ॥ छन्द चिभङ्गी ।

सुर पुर के राजा सङ्कहि भाजा मेरु समाजा जाय परैं ।
तहाँ करत बड़ाइ दुर्गा माई लेऊ बचाई अधिक डरैं ॥
को गनति महीसा रङ्काधीसा लावैं सीसा सुनि ठहरैं ।
धूली के दप्पैं दिनकर झप्पैं मेदनि कम्पैं को ठहरैं ॥
बीजापुर बङ्गा औध सुरङ्गा जित बिप सङ्गा जोग भरैं ।
ऊगली कलकत्ता बिपतनि सत्ता तेजहि लत्ता फिरति फिरैं ॥
दच्छिन नर नाहा तेजि सिलाहा भेजहि बाहा को ठहरैं ।
ढक्का के रानी फिरहिं दिवानी ओ मकमानी बिप हहरैं ॥
डिल्ली सगबग्गी कासी भग्गी बेतिआ टग्गी को ठहरैं ।
दीनन सभ के गति डरत सकल अति मैथिल भूपति को बहरैं ॥ १३ ॥

॥ १४ ॥ दोहा ।

किल्लाङ्ह तें कूच करि कर में गहो कमान ।
महाराज डेरा दियो हरिना के मैदान ॥ १४ ॥

॥ १५ ॥ छन्द नराच ।

बड़ी बड़ी बनात की कनात जाहि राउटी ।
तहाँ तहाँ जमाहिरे जड़ाउ लाल तें जटी ॥
लगे लगे हजार हेम तार कोर सो भरै ।
कहू कहू बितान आसमान ल्यो रहै खरै ॥
कहूँ अनेक रूप की बिचित्र पालकी पड़ी ।
कहूँ हजार के सिलाह और लालकी धरी ॥
कहूँ तुरङ्ग औ मतङ्ग सों धरे हजारही ।
कहूँ कमान और बेस बान बेसुमारही ॥

कहूँ अनेक दुन्दुभी बिदङ्ग रङ्ग रङ्ग के ।
कहूँ सिपाह तुङ्गदार जेतवार जङ्ग के ॥ १५ ॥

॥ १६ ॥ दोहा ।

उरदू बिप मिथिलेस को बरनत हैं कबि लाल ।
अमर नगर तें चौगुनो लागत अधिक बिसाल ॥ १६ ॥

॥ १७ ॥ छन्द भुजङ्गप्रयात ।

फुहाड़ा गड़े औ बने चारु हट्टा ।
हजारी बेपारी चले बान्धि ठट्टा ॥
घनेरे जहाँ जाचि के जाचि आवैं ।
नयी अङ्गना सेा बनी गीत गावैं ॥
कहूँ कन्द चीनी बिकै नेान गट्टा ।
कि जाके चखे तें सुधा होत खट्टा ॥
कहूँ तें बतासा बनै औ मिठाई ।
कहूँ आनि मेवा धरे हैं बनाई ॥
कहूँ मीसरी औ जिलेबी पके हैं ।
करैं मेाल जोलैं बहुतेा खड़े हैं ॥
कहूँ सक्करे औ बिकै गूड़ चक्की ।
कहूँ तें सोहारी धरी घीउ पक्की ॥
जबाड़ा सरोही कहूँ तेग बिकैं ।
कहूँ जोहरे मोहरे देत सिकैं ॥
कहूँ तोसखाने लगी भीर भारी ।
तुरङ्ग बिकै लच्छ कच्छी खन्हारी ॥
कहूँ मत्त मातङ्ग ऊँटे घनेरा ।
कहूँ चित्र लेखत खड़े हैं चितेरा ॥
कहूँ दाख लाखैं कहूँ हैं छोहाड़ा ।
कहूँ हैाज मैं बेस कूटत पोहाड़ा ॥
कहूँ बादला साल बाफी दोसाला ।
कहूँ लाल मेाती बिकैं कण्ठ माला ॥
कहूँ बाफदा थान खासा पोसाकी ।
कहूँ नाहि जाने कोऊ मेाल जा की ॥ १७ ॥

॥ १८ ॥ दोहा ।

रामपटी तैं कूच करि पड़ो अचानक जाय ।
तब डङ्का भूपति सुन्यो नाजिम पञ्चँ आय ॥ १८ ॥

॥ १९ ॥ छन्द भुजङ्गप्रयात ।

दोऊ ओर फौजैं भयी हैं तयारी ।
तहाँ बीच दरम्यान दरिआओ भारी ॥
चलै बान कम्मान गोला हजारे ।
सभैं एक हो कै गिरै जो सितारे ॥
कड़ीबान छूटै गजर के घड़ी सी ।
छकी आसमानो लगी फुलझड़ी सी ॥
पञ्चँ के बहेलियँ ने गोली सैं मारी ।
हटी जाय पीछे लटी फौज सारी ॥
जो घाइल पड़े सो चढ़नु जाय खाटैं ।
कहूँ कोउ आयोन सके नाहि बाटैं ॥ १९ ॥

॥ २० ॥ दोहा ।

बकसी सै भूपति कह्यौ चढ़ि देखो मैदान ।
रहो सभै होसियार सैं करि है दगा निदान ॥
जाफर खाँ को साथ करि दूजे हाला राय ।
डङ्का दै बकसी चलैं चढ़ै खेत पर जाय ॥
महथा पेच खेलाय कै काढ़ दखायो बाट ।
चढ़ी सवारी पार ह्वै गङ्गदुआर के घाट ॥
धावा करि कै आए गौ बिन्नपूर है टोल ।
हलकारे बिप सैं कह्यौ भयौ मोहब्बिल गोल ॥
आए दोउ महा बली मित्रजीत उमराओ ।
भूपति को परनाम करि दियौ रिकेबनि पाँओ ॥ २० ॥

॥ २१ ॥ छन्द भुजङ्गप्रयात ।

चलैं बैस बघेल बकबात हाड़ा ।
लिऐं हाथ के बीच तेगा जड़ावा ॥
बनै सूर के सूर हाड़ा बिराजैं ।
चहूँ ओर सैं दुन्दुभी जोर बाजैं ॥

चलै बान कम्मान गोला हजारैं ।
बहादुर दोऊ बाग को नाहि फेरैं ॥
कदम दर कदम तैं पड़ी फौज जाई ।
महा अष्टमी को लगी है लड़ाई ॥
दमामा नफीरी घनैं सङ्ख बाजैं ।
अनोरे पड़ी राम चक्रे अवाजैं ॥
उठाई सलाबति ने घोड़े के बागैं ।
भए सिङ्ख उमराओ आड़े हो आगैं ॥
बहादुर दोऊ को कहाँ ल्यो बड़ाई ।
पड़ी कर्न पारथ के ऐसो लड़ाई ॥
निकलि खाप तैं खूब तेगा चली है ।
महा घन घटा दामिनी जो भयी है ॥
जखम खाय पीछे भए हैं नचारा ।
पकड़ि कै सलाबति को नीचे दै मारा ॥
चलै घाय कै देखि आगे भिखारी ।
पहुँच तो सकै नाहि हौदे को मारी ॥
लगी आनि गोली गिरै बीर बङ्का ।
भरी सी पुरन्दर पुरी जाय सङ्का ॥
चहू ओर जा की छकी कीर्त्ति जाई ।
लिऐं फूल माला परी पास आई ॥
बड़ो बीर साथी हजारैं हजारैं ।
सभै छाड़ि घोड़ा भयो हैं उतारैं ॥ २१ ॥

॥ २२ ॥ छन्द नराच ।

पड़ै उठाय धाय धाय एक एक सैं लड़ैं ।
मनो गजेन्द्र सो गजेन्द्र जङ्ग जोर को धरैं ॥
महीप मित्रजीत राओ बखत सिङ्ह को धरैं ।
चखा चखी चपेट चोट लोट पोट ह्वै गिरैं ॥
सनासनी घनाघनी सुनी न जात तीर के ।
पड़ै जो खूब रङ्ग रङ्ग जङ्ग जो अमीर के ॥
जमातिदार और चोट को करैं निरन्तरा ।
पड़ै कमान बान सैं मही अकास अन्तरा ॥

सुन्यो बिपच्छ पच्छ लच्छ धीरता तबै गयी ।
धड़ा धड़ी हजार बार तोप की जबै भयी ॥
उठे अनोर घोर सोर ढाल की चटा चटी ।
जहाँ तहाँ चहू दिसा क्रिपान की खटा खटी ॥
भला भला हला करैं लड़ैं जो बीर कोप सैं ।
बदा बदी गिरैं जो मुण्ड कोटि कोटि धोप तैं ॥
कटैं कबन्ध भूमि घूमि घोर भाउरी भरैं ।
हहा गिराय कै हलाल केऊ काऊ को करैं ॥
सुमुण्ड कञ्ज रक्त पानि ज्यो सेमार केस के ।
नदी बही जहाँ तहाँ मैदान मीथिलेस के ॥
भयो फतेह बैरि जाल को निदान भोगिनी ।
गयी अघाय खाय खाय गण्ड मुण्ड जोगिनी ॥
असेख मुण्ड माल जाल कालिका लै आउती ।
कराल भूत साथ भूतनाथ को पैन्हाउती ॥
सबै फिरै मैदान छाड़ि फौजदार भागि गौ ।
भयो फतेह भूप को सुकीर्त्ति बम्ब बाजि गौ ॥ २२ ॥

॥ २३ ॥ दोहा ।

रन फतेह भौ भूप को फौजदार गौ भागि ।
चौगुन छै तिरहुति को कीर्त्ति उठी है जागि ॥
काढ़्यौ हाकिम जानि कै फक्त भिखारी एक ।
राखि लियौ जगदम्ब ने महाराज के टेक ॥ २३ ॥

॥ २४ ॥ छन्द भुजङ्गप्रयात ।

जो पीछै लगे हैं सभैं राव्यो राने ।
लुटै तोसखाने नगारे निसाने ॥
कछूँ पालकी लालकी कोटि हीरा ।
लुटै तोसदानैं भरैं खास बीरा ॥
ज्यो तम्बू कनातैं लुटैं ऊँट गाड़ी ।
लुटे है कछूँ केऊ काछू पिछाड़ी ॥
बरच्छी धमाका लुटे साँगि नेजा ।
गथे हैं कछूँ केऊ काछू करेजा ॥

कहूँ बाजि हाथी लुटे बैस धाईं।
महाराज जू को फिरी हैं दोहाईं॥ २४॥

॥ २५ ॥ दोहा।

लूटि कूटि लीन्यो सभनि लिधुर लपेटे अङ्ग।
बाल सुकवि यह भाँति भो समर भिखारी भङ्ग॥ २५॥

इति॥

TRANSLATION.

1. *Dohá.*

To Rám Naráyan Bhúp* came an enemy (of Narendra Singh) and said, 'the Lord of Mithilá has cast aside the rule of government.' So he arranged to take Tirhut under direct management, and Mahthá was appointed general in company with Salábati Ráy. There were, also, Bakht Singh, the liberator of his family, courageous Roṛ Mall, who was the sun among the Chaubháns, and Bhánu Sukul, each a greater hero than the other. Such men were taken into service, and Mahthá with five thousand men at arms crossed the river when *diksul* and *joginí*† were in front of him.

2. *Chhand Bhujangaprayát.*

The governor's army proceeded, and the kettle-drums beat. All the artillery was brought out at daybreak. Over the black coloured elephants flapped the flags, and long muskets, elephant-cannons and *chandrabáns*‡ shone. Sesha, the mountains, the earth, the mundane boar and the elephants of the quarters shook from the trampling, and the dust arose and filled the sky and covered the sun. Drums, trumpets and trombones sounded, and the whole earth quivered, and each continent

* The well-known Súbah of Bihár, who flourished during the last century. He was drowned by Mír Kásim on A. D. 1773.

† An inauspicious planetary conjuncture. *Diksul* is a day on which it is inauspicious to go in a certain direction; such as Friday and Sunday for West, and Saturday and Monday for East. Compare the proverb दाहिन जोगिन पीछे काल, धर फाड़े मुदई का गाल, if one starts when *joginí* is to his right and *kál* behind him, he will seize his enemy by the throat and kill him.

‡ Different kinds of ancient guns.

shook. The sword-bearers as they stood before their masters were joyful, as their vigour for battle came to a head. With great pleasure the gate opened, and there issued forth Shekhs and Saiyads who took horse-armour and rode. In front gleamed the wand-bearers, feeling happy under the shadow of their spears. 'Speed on, we have far to go, and vast treasure is loaded in the carts.' They marched with great valour from one halt to another, Indra himself could not match their magnificence. They had all waist-bands set with jewels, and on the way inquired the road to Bhawáṛá.*

3. *Dohá.*

The news-bearers informed and told the king (of Tirhut) that Mahthá had arrived with five thousand cavalry. The king sent for his astrologers, and asked them to calculate, and (after hearing their decision) determined not to engage in battle there (at Bhawáṛá), but on the other side of the great Balán.† When he had settled all this, he came out and sat down, sent for the heralds and told them to have all the army in readiness.

4. *Chhand Narách.*

The heralds went into the midst of the army and running hither and thither proclaimed, 'be ready, brave men, and take up your arms.' They commenced making themselves ready, as the captains thundered out their joy. On all sides was heard a continuous noise, and a terrible uproar uprose. Everywhere were displayed bows, arrows and javelins of various kinds. In one's judgment it appeared as if each soldier in the midst of the field was superior to Bhíma. The mighty warriors got ready and issued from their houses, and their horses excelled the wind itself in speed.

5. *Dohá.*

The mighty warriors distributed alms to all, and after enjoying various pleasures proceeded to the (palace of the) king of Mithilá. The warder at the gate approached and told him saying 'the belted soldiers are all ready and present.' One by one they paid their respects to him, which he accepted. Lál, the great poet, says that they sat round the

* A village close to Madhubaní in the Darbhangá district, a former seat of the Darbhangá Ráj.

† There are in Darbhangá two rivers called Balán, *viz.* the Baṛí- or great-Balán and the Bhutiyá- or ghost-Balán. The former enters British territory from the Himálaya at Laukahá and runs north and south about thirty miles east of Madhubaní. The latter lies more to the east, and never has the same bed two years running, continually disappearing from one place and reappearing elsewhere,—hence its name.

A bode of Happiness. To his south sat the Bábús* and the Prime minister, to his north the wizards and the wise men, to his west the soldiers, and near him the Bakhshí† and the chief house-servants in gorgeous apparel stood behind him. The chief of the exchequer who attended day and night, and who knew about all jewels, was making a list of excellent‡ bows and arrows. Maháráj Narendra sat in the midst of all. Who can describe the splendour of one who was like the moon in the midst of stars?

6. *Chhand Bhujangaprayát.*

In one place a pandit was supporting his views in discussion, in another the skilled Baidiks were singing the essence of the Vedas. In another astronomers were correcting the time-piece, in another Tántriks were reading charms and exorcisms, in another great poets were composing hundreds of martial songs, in another panegyrists recited epics, in another Sarb Ján Jhá§ was dictating as if he knew everything, in another people explained dictionaries and rhetoric, in another they discussed Persian verses with learned Maulwís, in another Munshís sat elated with Persian knowledge, in another dairy-maids brought tyre to the gate, and in another fair damsels with water jars added to the pleasures.

7. *Dohá.*

The poet Lál describes the various Rajpúts who were in the royal assembly, who sat round the king armed with swords and shields.

8. *Chhand Tribhangí.*

Ráuts and Rajpúts, all worthy sons, seeing whose valour even Indra with his army was put to fear, warlike Baish, Bandelá, heroic Chandelá and Baghelá‖ armed with swords were conspicuous, Chaubhán Bisená who formed the strong portion¶ of the army, and Ráyṭhaur, who filled the troops with heroes. Hárá and Kachhbáhá came with their weapons, men who cried 'Há, Há' and fell upon the enemy, Dabbai, Aridambhá, Nikumbhá, and Ganhwariyá the great heroes, Sẽgar, Paribáhá, Haiharbáhá, and Haihaybansí, the terrible champions, Gautam, Bij'hariyá, Sarbariyá, and Raghubansí, the perfect princes, Gauṛá,

* In Mithilá this word is a high title of honour, reserved to relations of the Darbhangá Maháráj.

† See introduction.

‡ बोफा = لحفا

§ See introduction.

‖ These are all names of Rajpút tribes.

¶ सब्बर is for सबल *m. c.*

Bachhgotí of fame as pure as beauteous pearls, and Gaharwár, each with his own followers, Sirmorak, Kandá, the moon of the Kausik family, Baṛgaiyã́, and Karchoáliyá, Sagarbár the chief of warriors, Goṛ, Amaiṭhí and Chaughariyá, Tomar, Gahnautá and Gujar, Ránábansí and Sidhauṭiyá, Maunas, Bij'hariyá, the king of Nágpur, the great Mahrauṛí and Satauṛiyá,

9. *Chhand Pádákulak.*

Karambár, Pammár, Kaṭhelá, Kaṭ'hariyá, and the warrior Surnek. Lál the great poet knows the great grandeur of the warriors who were accustomed to wield swords upon their enemies' heads.

10. *Dohá.*

Horses, tall, swift in speed, and mighty in the fierce battle-field,—these they untied, caught hold of their reins and brought out.

11. *Chhand Bhujangaprayát.*

Turkish, Arab, Iráki, and excellent Kachchhí; sea horses and the Kanhárí which excelled the Lachchhí fish in speed. None can describe the graceful paces of the swift Tází, Mujannas, and Piṭhání, excellent, graceful steeds of Kamboj, as mobile as water, and fleet as quicksilver in a metal dish. The horses shone of various colours,—there were chestnut ones, and fish-coloured ones, light yellows, and very dark blues, tawny yellows, dark blacks, and handsome browns, iron-greys, greys, blues and blacks, bays and whites which were companions of the wind in speed, and broke down the pride of Indra's horse Uchchaissravá. Horses blazed on the five lucky places,* stood as if they themselves were giving luck. Some were of the colour of pigeons, and seemed as if they had been coloured by painters. The saddles and bridles were embroidered with thousands of varieties of gold wire and diamonds.

12. *Dohá.*

Each warrior saluted and mounted his own horse. From the fort to the Kamlá† they formed a dense crowd. King Narendra saw an auspicious kite‡ in the sky, and his moonlike face flashed. He uttered the auspicious names Lambodar and Bighnes§ and sallied forth. He fastened on his forehead a fish's tail, and wore a safflower garland, and after saluting Bighnes, the king issued from his palace.

* White stockings, and a white blaze on the forehead.

† A river about five miles west of Bhawárá.

‡ *Chhemankarini*, the Bráhmaní kite or Coromandel eagle, considered as a bird of good omen, *Falco Ponticerianus.*

§ Two names of Ganes, the conqueror of obstacles.

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13. *Chhand Tribhangí.*

Indra, the king of heaven ran away in terror, and took shelter on mount Meru. There he extolled mother Durgá, and besought her to save him from his great fear. Who can count the kings of the earth? They were but lords of the poor, and easily submitted to his (Narendra's) authority. By the pride of the dust of his troops the very sun was obscured, and the earth trembled. Who could withstand him. The great warrior of Bijápur, and the heroic king of Audh, took to penance and so conquered their fears. The Rájás of Huglí and Calcutta gave up their power, and wandered about clothed in rags. The king of the south deserted his arms and presented slaves. The queen of Ḍháká wandered about like a mad woman, and other kings too lost heart. Ḍillí shook, Banáras fled, Betiyá fell down, for who could stand in his way. All feared much when the king of Mithilá, the refuge of the distressed, issued forth.

14. *Dohá.*

The Maháráj, bow in hand, marched from the fort, and encamped in the plain of Hariná.

15. *Chhand Narách.*

Very long tent-walls of cloth upheld the tents set with jewels and thousands of golden wires. In one place stood canopies reaching to the sky, in another were deposited rare kinds of palanquins. Elsewhere were thousands of weapons and litters,* and of horses and elephants. Elsewhere were laid bows and innumerable arrows of excellent quality. Elsewhere were drums of various kinds, while in other places were the brilliant soldiers, conquerors in fight.

16. *Dohá.*

Kabí Lál describes the camp-bazár of the Lord of Mithilá. It appeared four times as extensive as the city of the gods.

17. *Chhand Bhujangaprayát.*

The fountain was laid and a beautiful market established. Thousands of merchants marched in rows. Numerous young damsels sang sweet songs and asked for alms. Here were being sold edible roots,† sugar and bags of salt. He who tasted these, considered thereafter ambrosia sour. There were they preparing sponge-cakes and sweetmeats. Here were fruits in syrup, there were sugarcandy and *jilebís*,‡

* A *lál'kí* or *nál'kí* is the ornamented litter used at a wedding.

† *Kund* is roots like the potatoe, yam, &c., as distinguished from *múl*, which means roots like the turnip, carrot, or radish.

‡ A kind of long hollow tube of flour and sugar, curled into patterns, and filled with syrup.

and many stood bargaining their prices. Here were they selling brown sugar and slabs of molasses, and there were laid cakes prepared in clarified butter. Here were sold embroidered scymitars and swords, and there the jewellers were selling *sikká* gold mohars. Here people were greatly crowded round the store house, and thousands of Kachchhí and Khanhárí horses were being sold; there were infuriated elephants, and many camels. Here were painters standing as they painted pictures, there were laid hundreds of thousands of raisins and dried dates, and in another place fell into the reservoir showers from the fountain. Here were golden threads, and woollen§ double shawls, there were sold necklaces of jewels and pearls. Here were lengths of silken cloth, and coats of muslin whose price no one was able to fix.

18. *Dohá.*

They marched from Rámpaṭí,‖ and thence to Achának. There the king heard the beat of kettledrums, and knew that the army of the Governor was very near.

19. *Chhand Bhujangaprayát.*

On both sides the armies were ready, and in the midst was the great river. Thousands of arrows, bows, and cannon balls were discharged, which seemed as if all the stars were falling from heaven at once. The wand-bearers ran up and down quick as the chimes (rung at the end of a watch). The sky was filled up as if with fireworks in the form of flowers. The hunters, approached and shot the enemy who lost heart and retired. The wounded were laid on beds (and so thick did they lie) that no one was able to pass by that way.

20. *Dohá.*

The king told the Bakhshí to go up to the battle-field, and to keep all on the alert, for fear the enemy should in the end have recourse to some strátagem. The Bakhshí took Jáfar Khán and Hálá Ráy, beat the bass kettledrum, and entered the battle-field. Some one showed Mahthá the way, and he performed a stratagem, and mounting a conveyance he crossed the river at Gangduár Ghát. Then doubling his pace he arrived at the hamlet of Bishnupúr. The messengers told the king that the armies (*lit.* crowds) had come to close quarters, and the two mighty heroes Mitrajít and Umráo saluted the king and thrust their feet into the stirrup.

* *Sál báfí* means woven of wool.

† About five miles east of Bhawárá.

21. *Chhand Bhujangaprayát.*

The Bais, Bagghel, Bachhbaut, and Hárá* marched down with jewelled swords in their hands. The Hárás shone each a greater hero than the other and on all sides the drums loudly sounded. Thousands, of arrows, bows, and cannon-balls were discharged, but on neither side would the great warriors retreat. Step by step the armies approached each other, and on the festival of the Mahásháṭamí (the eighth day of the bright half of Ásin, sacred to Durgá) the (final) struggle took place. Countless drums, trumpets, and conches sounded, and, O Rám, a dense, loud, noise arose. Salábati galloped his horse, and Umráo Singh stood up to oppose him. Both were heroes of matchless valour, and the duel between them was like that between Karṇa and Arjuna. They drew their swords from the scabbards, and struck out fiercely with them, so that they flashed like lightening amidst the dense clouds. In the end Salábati was wounded, and tottered helpless and Umráo seized him, thrust him down and killed him. Bhikhárí saw this and ran up, but could not arrive in time, and only struck at the (elephant's) howdah. The cannon balls began to fall amongst them, and the brave heroes fell, so that dread filled the city of Indra itself (at the sight). Fairies, whose fame had filled the whole earth, then came down with garlands of flowers. Then the great heroes, with thousands and thousands of companions, alighted from their horses.

22. *Chhand Narách.*

They fell, they raised each other, they ran here and there, they fought in single combat like huge elephants wrestling together. King Mitrajít Ráo caught hold of Bakht Singh, who, struck with severe blows, fell down whirling. Words could not be heard for the hissing of the countless arrows, as the nobles fought in different ways. The captains kept causing wounds incessantly, and the arrows despatched from their bows filled the whole space betwixt heaven and earth. As each heard of the defeat of his side, he lost control over himself, when in the struggle the cannons thundered a thousand times. Loud horrible noises arose as shield crashed against shield, and as all around sword clashed against sword. In their rage the heroes shout 'It is well, it is well', and rushed forward to the fight, and in pitched combats ten million heads were severed with long-swords. The headless trunks turned round and fell with a terrible whirl upon the earth. Ah! one beats another down and butchers him. In the battle-field of the Lord of Mithilá, a river flowed here and there, in which the lotuses were represented by handsome heads, the water blood, and the weeds (the

* Various Rajpút tribes.

corpses') hair. The battle was won, and at the end enjoying the feast on the enemy, ghouls ate and ate the (dead soldiers') heads till they were satiated. Kálí herself brought home numerous garlands of human heads, and with huge demons, invested their lord (Siva) with them. All the (king's army) returned from the battle-field for the general (Bhikhárí) had fled away. The king (of Mithilá) gained the victory, and the drum of his fame resounded.

23. *Dohá.*

The king gained the victory, the general fled; and the fame of Tirhut quadrupled. The mother of the universe kept her promise to the Maháráj, and spared only one man—Bhikhárí, on account of his high position.

24. *Chhand Bhujangaprayát.*

All the Ráos and Ránás who remained behind plundered the store-house, the double-drums and flags. Here they looted palanquins, litters and ten millions of diamonds, and there cartridge boxes filled by special heroes. They plundered tents, tent-walls, camels, and carts. Here and there, some pillaged behind others. They looted spears, elephant-cannons, lances and javelins, and here and there one (quarrelled) with another, and pierced him to the heart. In other places the men of the Bais clan ran over and pillaged horses and elephants. In this way was the government of the Maháráj re-established.*

25. *Dohá.*

When they had finished pillaging they returned besmeared with blood, and Lál, the good poet, says that in this manner Bhikhárí lost the battle.

Two versions of the Song of Gopí Chand.—Edited and translated by G. A. Grierson, C. S.

There is no legend more popular throughout the whole of Northern India, than those of Bhartharí and his nephew Gopí Chand. They were two kings who deserted their thrones to become disciples of Gorakhnáth. The story of Gopí Chand has penetrated as far east as even Rangpúr, where it is preserved in the Song of Mánik Chandra.† A Hindí version of the legend can be bought for a few pice in any up-country bazár.‡ The two versions here given in parallel columns were taken down from

* *Lit.* Cries of alas (from persons seeking justice) were again made to the Maháráj.

† Published in J. A. S. B., Part I, No. 3, 1878.

‡ Gopí Chand Bharthari ká Jog, by Lachhman Dás.

the mouths of singers in different parts of Bihár. The Bhojpúri version was found in Sháhábád, and the Magahí one in Gayá. They are excellent examples of these two closely related dialects.

The following is a brief account of the whole tale of Gopí Chand taken from the Gopí Chand Bharthari ká Jog above referred to. The two Bihárí versions only contain the latter portion of the legend. Gopí Chand was a king of Dhára. His mother's name was Maináwatí, and her brother was the famous Bharthari, who, after being a king, himself became a disciple of Gorakhnáth and a Jogí. When Gopí Chand grew up and was married, his mother attempted to induce him also to take vows of asceticism. After making various objections he finally consented and went off to look for Gorakhnáth who was his mother's *guru*. On the way he found his mother's brother Bharthari, who at first attempted to turn him from his purpose, but finally took him to Gorakhnáth. The latter also dissuaded, but finding the king persistent ordered him, as a test to go forth as a beggar, and ask for alms from his wife, Queen Ratan Kumárí. After wandering through many lands, he reached his palace, and asked for alms. A maid-servant came out but he refused to take anything from her, telling her to go and tell the Queen that he wished to receive alms from her. The Queen came, and also endeavoured to dissuade him from becoming an ascetic, and entreated him to stay with her. He refused. The author then* continues:—

इतनी बात रानी रतन कुमारी की सुन के, गोपी चन्द वहाँ से चल दिये और चले जहाँ मैनावती माता बैठी, जहाँ आय पहुँचे, और माता जी को भली भाँति से प्रनाम किया। तब माता ने भली भाँति से आसीस दीनी। तब माता से आग्या ले कर बाकी समाचार मुख जबानी से बरनन किये। तब माता ने फेर उत्तर दिया कि बेटा सुनो——

अब जवाब माता का गोपी चन्द से।

छन्द कुण्डलिया।

दोहा॥ चार खूट रमते फिरो करो देस की सैर।
बङ्गाले मति जाइयो जो तूं चाहै खैर॥

कव्य॥ (बेटा जी†) जो तू चाहे खैर तेरि बरजै महतारी।
सुनि गोपी चन्द लाल अरज एक मान हमारी॥

* The metre of the following version is often incorrect in the original, and is given as *dohás* and *chaupáis*. It is really not very correct *kuṇḍaliyá*. The last word of each *kábya* should properly be same as the first word of the preceding *dohá*, but this is not the case.

† The words *betá jí* &c., do not form part of the metre. Such additional words are known in prosody technically as *jor*, and should be read in a lower tone than the rest of the poem.

(बेटा जी) गुरु से राखेा ध्यान रहैगी लाज तुम्हारी।
दरसन दीजेा फेर तेरि सूरति पर बारी ॥ १ ॥
दो० ॥ बङ्गाला कैसा बसै कैसा उस का भेस।
हम ने तो देखा नहीं राज किये चऊँ देस ॥
का० ॥ (माता जी) राज किये चऊँ देस मुल्क मे देखे सारे।
दिल्ली सहर सुथान देखि लिय तक्त तिजारे ॥
(माता जी) दक्खिन औा गुजरात रहे ना हम से न्यारे।
पूरब पच्छिम देखि लिये सब बलख बुखारे ॥ २ ॥
दो० ॥ बचन हमारा मानियेा बङ्गाले मति जाय।
बहिन तेरि चम्पावती देखत हीं मरि जाय ॥
का० ॥ (बेटा जी) देखत हीं मरि जाय बहिन चम्पा दे तेरी।
तोहि लागे अपराध करै क्यों ऐसी फेरी ॥
(बेटा जी) चन्दन बिरवा छोड़ पेड़ क्यों बोवै बेरी।
जनम अकारथ जाय कही तुम मानेा मेरी ॥ ३ ॥
दो० ॥ जा दिन से जेागी भये करि करि भगवा भेख।
घर सेालह सै नारि है इन में मरी न एक ॥
बहिन मेरी कैसे मरेगी

The substance of the foregoing (it is too easy to need translation) is that Gopí Chand went to his mother, who warned him in his journeys never to go to Bangál. The king says he has never yet been there, and asks what sort of country it is. He has been all over India, Balkh and Bukhárá, but has never been there. The mother insists on the necessity of his avoiding Bangál, for his sister Champá (or Birná as she is called in the Bihárí versions) lives there, and if she chance to see him wandering as a beggar, she will die of grief. To which he replies, 'when I went first to be an ascetic, I left sixteen hundred wives behind me, and not one of them died. Why then should my sister die?'

In spite of his mother's warning Gopí Chand goes to Bangál, and calls at the palace of his sister Champá for alms. A maid-servant comes out and offers them to him, but he refuses to take them from her, saying he will take them from the hand of Champá and of no one else. She gets angry at this, whereupon he chides her saying 'I bought you and gave you to my sister in her dowry, but now that I have become an ascetic you do not recognize me.' The girl then goes and tells Champá, who comes out and at first refuses to believe that the beggar is her brother. When, however, he proved his identity, by recalling to her particulars of her wedding which none but he could know, she became

convinced, and according to Mainávatí's prophecy fell down dead. Gopí Chand then called on his master Gorakhnáth, who came and restored her to life. This is the end of the usual story. The Magahí version carries the story on a stage further. It adds that Birná (*i. e.* Champá), after coming to life, wept and wept till the earth opened and swallowed her up.

गीत राजा गोपो चन्द।

(Bhojpúrí.)

१। पाड़ के पितम्मर राजा गोपी चन्द गुदड़ी बनावत बाड़े। बीचे लागे हीरा लाल मोती। बन गैलि गुदड़िया अनमोल। पहिर के गुदड़ी राजा रमि के चलत हैं। माता उन्ह के गुदड़ी ध॰ के ठाढ़े। तोहि देख बेटा बाँधों धिरजवा। तूँ तो निकल के बेटा होत बाड़े जोगी। नौ रे महिना बेटा ओदर में रखलों, ऐहँ रे बिपतिया लाल मोरे काम। सात सेात के दुधवा पियाएऊँ। तवना के दमवाँ मोहि दे के जाऊ॥

गैया भैंसिया के दुधवा तूँ चाहु हटिया बजरिया से किनि के मैं देओं। बाबा के सगरवा दूध से भराऊँ, तार लेहु तूँ दुधवा के दाम। तेऊ पर उरिन मैं माँता से नाहिं। दुधवा तूँ बकसू माँता धरम के पीछे॥ लागु परदेसिया तू रे जोगी। दुधवा

गीत राजा गोपो चन्द।

(Magahí.)

१। पहिरि गुदरी राजा बन चले। माता गुदरी धरि ठाढ़॥ नव महिना बेटा उदर में पाललूँ। दसवाँ में लिऐल॰ अवतार। जनम तें मरि जैत॰, बेटा, करतूँ सँतोख। एतना न॰ बोल॰ गोपी चन्द कि, जानू, मैआ, जन्म के हम बाँझ ही। जानू हमरा कोख में ढाक मदार जन्मल, एह से अप्पन पापी प्रान के समुझाऊ॥ एतना बोलल मैना माता, बसल बसल नगरी कैल॰ उजाड़। तोहि बिना मँडलिया सून गोपी चन्द। एतना न॰ बोल॰ गोपी चन्द, कहे माता मैना, दूध के दाम देइ लेऊ, तब पाछे फकीर होइ जाऊ॥ एतना सुने गोपी चन्द तब सूझे धरती ऊपर असमान। कउन ऐसन बेटा होअत जे स्वर्ग के तरग गिनत। कउन ऐसन बेटा होअत जे माता के दूध के दाम देत। जौं मैना माता गाइ के दूध चहितौ, हाट बजार से मँगाय देतूँ। तोहार दूध से आलाचार है। तोहार दूध के माइ सारा बदन पालल है, तोहार दूध अनमोल है॥ गाइ भैंस के दूध बेटा नहिं पिलौली। पिलौली हम स्थन के दूध। दूध के हरावन डाले जोगी। बेटा फकीर न॰ हो। आभ पाल॰ गाढ़ी दीन गाढ़ी रात।

त० बकसोँ बेटा धरम के पीछे। प्रतनी कहलिया मोर मान लेबे॥

प्रक दीन बेटा बिपत मेँ काम आवह। तूँ निकल के, बे, फकीर जोगी मत होअ, प्रतना न० बोलह गोपी चन्द॥

२। आन दे मैना माता छूरी कटारी। काट के कलेजी रख देऊँ, तब जोगी फकीर होइ जाऊँ। मैना माता दूध बकसू धर्म के। निहोरे लागे परदेसी तोहार जोगी॥ जियत रह० बेटा, जोगी हो के आइ मिलह। करि तीरथ बरत होय सवाब॥ मुलाकात बरि दूर गेल माता। प्रतना न० बोलू, मैना माता, कि हमे बकसलूँ। बकसथुन परमेस्वर जे जन्म कर्म्म देलक॥

३। हाथिन के छोड़े गोपी चन्द। ऊँटन के छोड़े उँटसार। घोड़न के छोड़े घोड़सार। नव सै छोड़े पैठान। पाँच सै रोए कन्या कुमार। नव सै रोए बिहायी। मैना माता रोऐ पटकि सिँघासन। हन्सा चिरईँ रोए कोठा के अटारी। गाँव के रोए रैयत किसान। बाट के रोए बटोही। कूआँ के रोए पनिहारिन। ऐसन ऐसन दुलरुआ निकल के भेलन जोगी॥

४। तीन रे तिरलोकिया मेँ फेरिया लगैहै। बहिन रे बिरनवा का देस मत जैहैँ। मरि जैहैँ बहिनिया तोर, छाती फाटि, जहिया सुनिहै भैया मोर भैल है जोगी॥ बारी सतरनियाँ रे बारे के बियाहल, तवनो गुदड़िया धै के ठाढ़े। तुहूँ तो सामी मोर जोगिया होत बाड़े। कवन रे अलिमियाँ मो के दे के जैबे। पथल के मुरतिया तो होत गोपी चन्दा। भवँरा भेलसवे उड़ि गैले॥

४। प्रतना बोलल मैना माता, सुन० बेटा हम्मर बात। तीन मुलुक भिच्छा माँग० बहिनी के देस मत जाऊ॥ भला तो कैलू माइ, चेतौलू चेताइ। भूलल बहिनी देलू समुझाइ॥ रोअत बहिनी तोहार छव मास। तेह बहिनी के नैहर के आस॥

५। पहिले बसेड़ देला केदली का बनवाँ। जँगली हरिनियाँ देख रोए। जङ्गल के मेवात तुर के खियावे। खा ले रे जोगिया मोर जङ्गल के मेवातु॥ अनवाँ न० खाबोँ माँता, पिअबोँ न० पनियाँ। बिरना सहर मोहि देहू बताइ॥ प्रतना बचनियाँ सुनि, बोले बनसपति, छवे रे महिना के रहिया बिरना सहरवा। मरि जैबे अनवाँ बिन पानी। अड़बड़ रहतवा तोर

५। पहिला मजिल कैलन गोपी चन्द। केदली जङ्गल मेँ परि गेल। साँझ बन के रोए बनसपति माइ। जङ्गल के रोए हरिन। हरिन के रोअले जङ्गल के पात खहराय। सूरत सकल देखि के आधी रात पछली पहर खोल के बजावे बनसपति। बनसपति के दया लागि जाय। बड़े बड़े सेर बड़े बड़े सिङ्घ मार के खाइ जैहै। बहिनी से मुलाकात नहिँ होय॥ गोपी चन्द

बिरना सहरवा॥ माँता मोर मिनतिया तो मान लेबे। तो केतने दिनवें में पऊँचे, मोर माँता, ओ ही तरे हमरा के देइ पऊँचाइ॥ चिल्हिया सरूप होत बनसपति, तोतवा सरूप लेत बैठाइ। बिरना सहरवा में देले पऊँचाइ॥

६। गलिया के गलिया बिरना फेरिया लगावे। जीअ मोर नगरिया के दाता लोग। राजन घरवा के दुअरा बतावह। तोहरे सरनियाँ में छाड़ देबों॥

बोलल, चाहे मरों, चाहे जीअों, जाएब बहिनी देस॥ बनसपति के दया लागल। गोपी चन्द के तोता बनौली, अपने हन्स चिरई बनि जाय। घड़ी पहर में गोपी चन्द बहिनो के देस में उतार देलक॥

६। बहिनो के देस में गोपी चन्द पऊँचल। मुँह खाक से भभूती लगाइ गुदरी से देह छिपाइ गली गली फोरे गोपी चन्द। सभ के दोआर चन्दन के पेड़, न० राजा के दोआर चीन्हल न० परजा के, सभ के दरवाजा फेरी लगौलक॥

नगरी के लोग कहलन, बाबा टीक०। खाइ खबर सभ केऊ लेत॥ गोपी चन्द बोलल कि हे गाँव के बहिनो माइ। राजा के दोआर हमरा बताइ देऊ। राजा के दोआर टीकब। परजा के दोआर नहिं टीकब॥ नगर के माइ बहिनी बोललन, ऊँची अटारी नीची दुआर। सोना के चौकठ रूपे केवाड़। औरा भौरा दो हाथिन। बारह बरस के सूखल चन्दन॥

ऊँच रे अटरिया नीच है दुअरिया। दुअरवे पर उकठल चनन के पेड़। उहे हवे रजवा घर के दुआर॥

७। ओहि तर जाइ जोगी धूंइयाँ लगावे। फूल के चननवा भैल कचनार। उपरा से ताकत बाड़ी बहिनी उन्ह के बिरना। ऐसन जोगी तपसी में नाहिं देखलों॥ जलदी बोलावत बाड़ो मुँगिया लौंड़िया। आऊ लौंड़ी उन्ह कर जतिया तें पुछू॥ हथवा त० जोड़ जोगी अरज लगावत बाड़े। लौंड़ी, मोर कहलकी तें मान ले। छतिरी मोरे जतिया। तें जा के बतैहे। कहिहे जनमवाँ के सिध हवे जोगो॥ जतिया छिपौल०, तो भल कैल०।

७। गोपी चन्द चलि भेल बहिनीक दुआर। सूखल चन्दन तरे धूंइ देल जमाइ। बारह बरिस के सूखल चन्दन भेल कचनार॥ देखे नगर के राजा परजा लोग। जोगी ना है। केऊ है भगवान। सूखल चन्दन बारह बरस के भेल कचनार॥ मूँगा लौंड़ी बोललो। सूखल सूखल चन्दन खातिर बरहमन खिलाऊँ। सूखल चन्दन होए कचनार। जोगी एक अनूप आएल॥ चार सखि आगे चार पाछे बीच में बहिनो उन्ह के चललन। खिरको पल्ला खोलि देलन। एक नजर जोगी के ऊपर एक नजर चन्दन के पेड़ तर। सूखल चन्दन रानी देखे कचनार, रानी गिरल मुरछाइ॥

८। बाबा भोजन के खबरिया त० द० ना बताइ। कि खैब० राजन घर के रसुइया, कि करब० दुधवा के फरहार॥ बारह बरिस भैल, रे लौंड़ी, कहियो हयवा हम नाहिँ जारल। हम त० खैबोँ राजन घर के रसोइ। तवन आवे बराम्हन बरुआ के हाथे। लौंड़ी के कुअलका ऊहो ना खैबोँ। कतिरी धरम मोर जाई नसाइ। नई रे बिपतिया राम मोर डालल। लिखल करमवाँ के भैलीँ जोगी॥

८। का जोगी भोजन करिह०। का करिह० अहार। कि राजा रसोइया जेमावत॥ गोपी चन्द बोलल, नई बिपत नरायन देलन। धूँआँ देखि नैना से आँसू ढरे। आग देखि देहो मेँ फोला पड़ि जाय। कह देह राजन के बरहमन के हाथ जेवनार बनाव०, तब तो खाएब॥

९। प्रतना बचनिया सोनि के लौंड़ी त० गैली, भोजन के खबरिया त० भोलि गैली लौंड़ी। भोलि गैली टहल टिकुरा। भोजन के खबरिया तो केऊ ना लेल। अधी त० राति जोगी बन्सी बजावे। बहिनी रे बिरनवाँ के सबद परले॥

९। मूँगा लौंड़ी भूलि गेल अपना पत्नी मेँ। रानी भूलि गेल पाट सिँगार। बरू बरहमन भूलि गेल अपना भङ्ग मेँ। आधी रात पहिले पहर बीत गेल। केऊ खाएब के खबर नहीँ लेलन। प्रतना मेँ गोपी चन्द मुरली बजाइ, हम्मर बहिनी खात पीत होअत, तो सत के सवाइ बढ़ि जाय। खाय बहिनी बिसरल होअत। जेतना भण्डार मेँ रहे सभ जरि जाएत। नवठी पात पुराव० न० खाय न० हम्मर धरम जाएत॥ प्रतना मेँ सुनली बहिनी मुरली के सबद॥

१०। जलदी बोलावे रानी मुँगिया लौंड़ी। एक जोगी दुअरा पर करत बा उपास। जलदी बोलाऊ लौंड़ी बराम्हन छोकड़वा। कहह्ह रे जेवना के कुसलात॥ जा के त० लौंड़ी बराम्हन के बोलावे। कत्तिस तौलिया मेँ कतिसो परकार। एको मेँ खाली ना। अबहीँ चाह० बराम्हन सै कुँअरा खियाव०। एक जोगी दुआर पर कवन बिसात॥

१०। मूँगा लौंड़ी, सभ खाय हमरा नगरी मेँ। जोगी उपास परे। मूँगा लौंड़ी कहली, हम का जानी। बरुआ बरहमन के बोलाइ भेजल। बरुआ बरहमन के बोललन, कि जलदी रसोइ दे आवह्ह जोगी के। बरुआ बोलल कि एक जोगी के कौन बिसात है। कएन सौ कूँअर जेंवा देऊँ॥

११। गोड़वा त० धोइ बराम्हन खोलत बा भण्डार। सारी रे तौलिया

११। सोना के खड़ौआँ पर होए असवार। जाइ के खोलै भण्डार। देखे

जर के खँगार। मनवाँ मैं सोचत बाड़े बराम्हन के छोकड़वा, कवन रे अचम्हो होइ गैले। ओहि रे तौलिया के जरी करौंदी मुँगिया लौंड़िया से देला भेजाइ। राजन घरवा के नैयाँ छिपैहै। कहिहै मोर गरिबवा घर के रसोइ॥ मुँगिया लौंड़ी रे ले के तो गैली। जोगी तोर करमवाँ मैं आगि लागे। जरि गैले मोर राजन घर के रसोइ॥

तो कृष्यन तौली मैं आग लागल। कृष्यन तौल। गरावं तो मूठी भर करौनी निकसल। बरुआ बरहमन बोलल कि मूँगा लौंड़ी जोगी के रसोई दे आवं॥ जात के जुठाही मूँगा, बात के होशियार। गरी, बदाम, छोहाड़ा, मोनक्का, पाँच खिल्ली पान लगा देथ। सोना के थाल मैं मूँगा लौंड़ी धर लेल। दही करौनी कटोरा मैं। ले गङ्गा जल पानी मूँगा लौंड़ी चललन। ले बाबा जोगी रसोइ। तोहरा करम मैं आग लागे॥ कोपकाप करि अँधिआरी। उठि गोपी चन्द अकुताइ। सोना के तुमड़ी ले पानी। सोना के कटोरा मैं ले रसोइ।

१२। एतना बचन सुनि जोगिया तं हँसे। चमकत बा बतिसिया रे मुख के दाँत। ओहि रे उजिअरवा मैं लेत बा करौंदी। का दिहली बहिन हमार॥ ओहि रे करौंदी राजा खुँटवा गठियावे। खात बाटे धुँइयाँ के खाक भभूति॥

१३। होत रे फजिरवा तं लोहिया लागे। बहिन के सगरवे पर करे असनान। सारी रे बदनियाँ तं गुदड़ी छपावे। मुँहवा के सुरतिया तो नाहिं रे छपे। सानि क भभुतिया तो भसम चढ़ावे। बहिन के दुअरवे पर ठाढ़ बाड़े। हथवा तं जोर जोगी अरज लगावे। हमरो तं भिक्षवा रानी देबे तोहरो दुअरवा हम छोड़ देबों॥

१२। कोपकाप के अँधिअरियाँ अपने रसोइ देखे के गोपी चन्द हँस देत। रात हलै, तं दीन होइ गेलइ। चदरी खोलि गेठिया लेलक रसोइआ जलल करौनी। गोपी चन्द धूनी काढ़ के राखि सानत होइ। पाँच पतरी पर रख देलक। पाँचो परकार बनि गेल॥

१३। होत फजिर जाए पोखरा पर असनान करे। सभ देह गुदरी से छिपाय, औ मुँह खाक भभूती लगाय। हमरा बहिनी नं चीन्हे। जोगी फकीर होइ जाऊँ॥ का गोपी चन्दा दाँत के बतीसी चमके। का गोपी चन्दा रे छले। एक बरन के गोपी चन्दा हलै, औ आठ बरन सूरत बढ़े॥ होत फजिर जाए बहिनी के दुआर। भिच्छा माँगे। जीए बहिनी बचा सुखदाय तोहार॥

१४। गुदड़ी बस्तर मूँगा लौंड़ी नेहार, देखि जोगी के सकल सूरत, गावत जाय रङ्ग महलों मैं। मूँगा लौंड़ी कहलन कि, हे बहिनी, जउन रङ्ग के गोपी चन्दा भाइ छोड़े, तउन रङ्ग के जोगी चन्दा बाबा॥ मूँगा लौंड़ी तोर भाइ भतीजा खाऊँ। हम्मर भाइ गोपी चन्दा जौं आवत तो उजरेपा बसे जाय।

नौ सै घोड़ा, नौ सै हाथी, नौ सै मोगल पैठान, नौ सै कूँअर पैठान ॥ मूँगा लौंड़ी बोलल, न॰ चलबू देखे, दमरी दोकरा माऊर खाय मरि जाय ॥ एतना सुनत बहिनी बिरना, जात के नीची, जात जुठाही मूँगा लौंड़ी। आज नहिँ हम चलबूँ, दमरी के माऊर ले के खाय मरि जाय। हमरा ऊपर अपराध चढ़े ॥ बाबा के हाथ के अंगुठी, औ महतारी के चिट सारी, औ भौजी के हाथ के कङ्कन, चार सखि आगे चार पाछे, सोनन के थाल में भीख लेले। ले, बाबा जोगी, छाड़॰ दुआर ॥

सोनवाँ रुपवा के खिचड़ी बनावत बाड़ी। चलत बाड़ी भैया के भिच्छा देबे। मुँगिया लौंड़िया से देली भेजाइ। जोगी आपन भिछवा ले, तूँ लेबे ॥

१५। हथवा त॰ जोर जोगी अरज लगावत बाड़े। कङ्कड़ पथरवा बहिन के रे चलावे। हम के देतू गुदड़ी के कपड़ा पुरान ॥ रहेला कपड़ा मोरी चेरिया लौंड़िया। फारे खातिर नाहिँ बाटे मोर कपड़ा पुरान। अपने मैं भैया के लाख सै दोहाइ। नाहिँ बाटे कपड़ा पुरान ॥ एतना बचनिया त॰ बहिन उन्ह के बोले। मरे तोरे भैया रे राजा गोपी चन्दा। झूठे रे किरियवा तूँ काहे के खाएऊ ॥ दे के सरपवा त॰ जोगी रम चलत बाड़े। बहिन उन्ह के गुदड़ी धे बिलमावे। फाड़ि के पितम्मर जोगी गुदड़ी बना देबों। काहे मोरा भैया के देऊ सराप। अपने गुरुअवा के लाख सै दोहाइ। अपने त॰ मतवा के दूध हराम। काहे मोरा भैया के दिहल॰ सराप ॥

१५। कङ्कड़ पथल छाड़लूँ माता के महल में। एह कङ्कड़ पथल ले के हम का करब ॥ बहिनी बोललीं, सोना चाँदी भिच्छा देत हिअउ, कङ्कड़ पथल बनाइ देलकै ॥ जौं कउनो साल दोसाला देतू तो गुदरिया बनाय देतूँ ॥ जोगी बाबा लेत नहिँ, ऐसी गाढ़ी कसम खा जाय। जोगी बाबा हम्मर दुआर छोड़ देहू। तोहरा जोग कपड़ा नहिँ है ॥

१६। हथवा त॰ जोड़ जोगी पता आपन बतलावत बाड़े। बङ्गा सहरवा राजा रघुबन्सी। बाबा रे तिरलोकी सिङ्ग के मैं नाती। बाबा रे भवन्दा सिङ्ग के मैं बेटा। अँधरी बहिनियाँ मैं तोर सग भैया। बड़ी तूँ संपतिया पर गैलू अँधराय। ना चिन्हलू उदरी एक भाइ ॥

१६। सुनि एतना बोलल गोपी चन्द, पाय धन गैलू उधराय। नहिँ चिन्हहू कोखिया के सङ्ग भाइ ॥ एतना सुन गोपी चन्द बोलल, हम नैहर के नाते तोहर भाइ ॥

१७। एतना बचन सुनि बहिन उन्ह के बोलत बा, सुन रे लौंड़िया मोरि बात। एह मोर भैया जोग नाहिँ बाड़े। बारह सै कुँअरवा मोरा देवढ़ी पर

नोकर। ओहि कुँअरवा में से जोगिया बाटे। जानत बाड़े मोर भाइ बाप के नाम। जहिया मोरे ऐते भैया गोपी चन्दा, चार सै तं घोड़ा ऐते ताजी और तुरकी। हथियन से हलफा उठि जैते। पैदल के गिनितिया कवन रे चलावे। उजरी नगरिया बस जैते, जहिया ऐते भैया मोर गोपी चन्दा।

हमरा भैया के हथवा में कलम के चिन्हवाँ। का मोरे भैया रे तिलक चढ़ाय। का मोरे भैया दिहले दहेज॥

१७। जब जानूँ के हम्मर भाइ हैा, कि बियाह जे मिलल हमरा से दे तूँ बताइ॥

लाख सै असरफी, रे बहिन, तिलक चढ़ाएऊँ। भँवरा हथिया दोअरा का पूजा। गाड़ी छकड़वा दिहले लदाइ सोनवाँ। कँसहँड़ के गिनती कवन चलावे। रुपिया पर कलम नं चलाएऊँ। बऊ के कँगनवाँ तोरे हथवा बिराजे। बाबा के मुँदरिया तोरा हथवा में चमके। पहिरले बाड़िस नैहर के चित रङ्ग सारी॥

गोपी चन्द बोलल कि देखं बाबा के हाथ के अँगूठी सोभे। माता के चिट-सार, भौजी के हाथ के कङ्कन॥

१८। एतना बचनिया सुनि के बहिन उन्ह के दौड़ल जैसे दूटे गैया के ओर बाछा। भाइ रे बहिनियाँ तं भेंटे लागे। जङ्गल के पतवा तं गैले खहराय। कै के जेवनवाँ में भैया के खियाओं। पाछे पूछों नैहर कुसलात। किहं भैया चढ़ि आइल सुबवा नवाब। के तोर देसवा रे छोर लेले। इहाँ में भेजों भैया जोरि फौदिया। तोहार देसवा लेऊँ छोड़ाइ॥ नाहिं बहिन चढ़े कैऊ सुबवा नवाब। नाहिं कैऊ मोर देसवा हर लेले। लिखल करमवाँ के भैले जोगी। तोरा हथवा के, बहिन, जेवना नाहिं खैबों। एहि घड़ी मोर हथवा छूँछ बाटे। रात के रसोइया तं देखु, बहिन बिरना। का दिहलू बहिन। जरि रे करमवाँ। खोरिया के टुकड़ा मोहि आँखिया देखालू। उतरल नगरिया के रे भार॥ खोलि के करौनी जोगिया देखाले। मरि गैली बहिनियाँ छाती फाट।

१८। एतना सुनि बहिनी बिरना घर के दुअरी लागे रोए। माय बिरोगिन, भाइ जोगिया आज। बैसं बैसं भैया पाट के सिंघासन। दुनियाँ दौलत देऊँ मँगाय॥

तोहरा दरवाजा बहिनी का करूँ। दो चार पैसा होइत, चूरी पहिरे के देइत। एतना में बोल सास ननन्द। रात मूँगा के हाथ के रसोइ कूअल खैलं। एतनी बेर चीन्ह पहचान भेल, ठनगन करत है॥ एतना सुनि बहिनी बिरना, कउन कउन बीँजन, कउन कउन परकार खाय। चदरी के खूँट में जलल करौनी बहिनी देखिस। हाय करि के बहिनी गेल मर।

१९। मनवाँ में सोचत बाड़े राजा गोपी चन्दा माँता के कहलिया साँच भैली॥ कमर से निकाले राजा कुड़िया कटरिया। अपना गरदनवाँ पर देत बा चलाइ। ऊपर त॰ गोसैंयाँ रे ध॰ त॰ लिहले। काहे के मारे जोगी अपन जियरवा। तोहरा अँगुरिया में अमिरित धरवा। चीर के अँगुरिया बहिन के पियाइ। जोगी रम के चल देले॥ इति॥

१९। मारौं छूरी कटारी। भाइ बहिनी के जगह मर जाऊँ॥ आय करि के नरायन बरहमन के रूप धरि पकड़ लिहलन। अरे पापी, कनगुरिया में अमरित फल है। ओहि बहिनी के देइ पियाय। मूअल बहिनी तोर जी जाय। आप भौंरा के सरूप धरि जोगी फकीर होइ रह॰॥

२०। बहिनी उठि बैठल। गली के गली रोए। चन्दन के पेड़ धरि रोए। चन्दन के पेड़ जवाब कैलक, तुम का रोऊ। तोहार भाइ जोगी होइ गेल। एतना में बहिनी हाय करे। फाटे धरती जाय समाय। भाइ बहिनी के नाता दुन्नो जने के टूट गेल॥ इति॥

TRANSLATION.

Song of Gopí Chand,—Bhojpúrí.

1. King Gopí Chand teareth up his royal robes and maketh out of it an ascetic's cloth. In its midst are fastened diamonds, rubies and pearls, and it was made a priceless cloth. He putteth on the cloth and starteth on his wanderings,* and his mother catcheth him by the cloth and standeth. 'When I see thee, my son, I control myself, for thou art going forth and becoming an ascetic. I held thee, my son, for nine months in my womb, thinking that my darling would be a help to me in trouble. I gave thee seven streams of milk to drink, pay me back the price thereof.'†

Song of Gopí Chand,—Magahí.

1. The king donneth an ascetic's cloth, and starteth for the forest. His mother catcheth him by the cloth and standeth, saying, 'I held thee for nine months in my womb, and in the tenth didst thou take human form. If thou hadst died in thy birth, I would have been contented. Say not, O Gopí Chand, "Imagine, mother, that thou art barren or that thy womb hath borne only a *ḍhák (butea frondosa)* or a *madár (asclepias gigantea)*.* With such words remonstrate with thy sinful soul."' So much said his mother Mainá. (Again she said) '(By thy going away) thou art laying waste an inhabited city, for without thee, Gopí Chand, the whole

* √ रम to go, wander.

† पियाइ॰ is 1st sing. of 2nd pret. In p. 39 of my Bh. Gram. I have marked it as wanting.

* Two trees. The first is good for nothing but firewood, and the second is very bitter.

palace is empty. Say not so, Gopí Chand,' saith his mother Mainá. 'First pay me the price of my milk and then go and become an ascetic.' When Gopí Chand heard this, he gazed upon the earth and upon the sky above. 'What sort of son is that, who can count the stars of heaven? He alone can pay his mother the price of her milk.

'If thou desire milk of cow or buffalo, I will buy it in the market and give it to thee. I will fill my father's tank with it, and with it wilt thou recover* the price of the milk. Even if I gave all this I would not be free from the debt. Do thou, O mother, give me a free gift of the milk, for the sake of virtue (*i. e.*, as a free gift).'

'Thou appearest, O my ascetic, to me, as amongst men of another land. I give thee, O son, the milk as a free gift, but mark this much of my words.

If, mother, thou hadst desired cow's milk, I could have bought it in the market, and given it to thee. But for thy milk I am without resource. Mother, my whole body hath been nourished by thy milk. Thy milk is beyond price.' His mother answered, 'It was not the milk of cow or buffalo that I gave thee to drink, 'twas the milk of my bosom. Thou art forgetting* the milk. Be not an ascetic. Protect me in days and nights of trouble (*lit.* on thick days and nights). Some day O my son, be a help to me in calamity. So, go not forth to become an ascetic. Say not so, Gopí Chand.'

2. 'Bring hither, mother Mainá, sword and dagger, that I may plant them in my liver. Or else let me go forth to be an ascetic. Give me, mother, thy milk as a free gift. Thine own ascetic of a foreign land beginneth to entreat thee.' His mother replied, 'Live my son and be an ascetic. Go thou forth, but come back to me. Great is the spiritual reward of visiting holy places and performing vows.' 'Mother, the day of meeting me again is gone far off. Say not, mother "It is I who have given the free gift." It is God who giveth me my birth, and decideth my fate.'

3. Gopí Chand leaveth his elephants. He leaveth his camels in the camel-stables, and his horses in the horse-stables. Nine hundred Paiṭhán attendants doth he leave behind. Five hundred damsels and princes weep for him. Nine hundred wedded wives weep for him. His mother Mainá dasheth down the throne and weepeth for him. The swans weep on the turrets of his house; in the villages weep the cultivators; on the way, the wayfarers; and by the well, the girls

* तार लेब, to recover, cf. तार गैल, it has not been lost. So also √ तर, to be found, recovered.

* धरावन = भुलावन.

who came to fetch water. 'So beloved is he of us who goeth forth as an ascetic.'

4. Thou wilt have to wander through the three worlds, but go not to the land of thy sister Birná. The heart of thy sister will burst and she will die when she heareth that her brother hath become an ascetic.'

Young Satraniyá whom he had married in his youth, she also catcheth him by the cloth and standeth. 'Thou, my husband, art becoming an ascetic, what support wilt thou give me before thou goest.'* Gopí Chand (refused to hear her and) became like an image of stone.†

5. His first halting place‡ was in the plantain-forest and the does of the forest as they see him, weep. (Banspatí, the Egeria of the forest) plucked and offered him fruits of the forest to eat. 'Eat O ascetic, the fruit of my forest.' 'I will not eat food, O mother, nor will I drink water. Tell me where is Birná's city.' When she heard these words Banspatí said 'Birná's

4. Then said his mother Mainá 'Hear, my son, my words. Throughout the three worlds may'st thou ask for alms, but go not thou to the land of thy sister.' 'Well hast thou done, O mother, to remind me. Thou hast caused me to remember my forgotten sister.' 'Thy sister hath been weeping for these six months, for all her hopes are fixed upon her parent's house.'

5. Gopí Chand's first stage fell in the Plantain forest. At even mother Banspatí of the wood weepeth. The does of the forest wept, and as they heard it the leaves of the forest fell down. When she saw his form and appearance Banspatí opened (her flute) and played in the second watch after midnight. She felt pity for him. 'Great tigers and

* अलमिया = अलम or आलम्ब a support.

† √ भेल्लस means to settle upon, but the sentence in which भेल्लसेव occurs is quite unintelligible. The words are written exactly as the singer gave them, but even he did not know their meaning. The sentence might perhaps mean 'The bee (i. e. Gopí Chand) immediately on settling flew away,' as if he was only paying a short visit to his home. A reference to the introduction will show that this was the case.

‡ बसेड़ is literally 'a roosting place.'

city is six months' journey distant. Thou wilt die without food and water. The path to thy sister Birná is rough.' 'O mother, hear my prayer. In as many days as thou dost arrive there, my mother, in so many cause me also to arrive.' Banspatí taketh the form of a hawk, and uplifting him in the shape of a parrot, carrieth him to Birná's city.

6. He began his perambulation of the lanes, crying, 'May ye live, my charitable folk of the city. Show me the way to your king's doorway, then will I leave your company.'*

'The turret is high, and the door is low. At the door is a dried up sandal tree. That is the king's doorway.'

7. The ascetic went before the sandal tree and lighteth his fire,† and, lo, the sandal tree flowered became fresh and green. From above his sister Birná is watching him, saying, 'I never saw a reverend ascetic like this before.' Quickly she calleth Mūgiyá her

lions will devour him, before he seeth (*i. e.*, if he trieth to see) his sister.' Said Gopí Chand, 'Let me die, or let me live, I will go to my sister's land.' Banspatí took pity on him. She turned Gopí Chand into a parrot, and herself into a swan, and in an hour and a watch set him down in his sister's land.

6. When Gopí Chand arrived at his sister's country, he applied ashes and burnt cowdung to his face, and hid his body beneath his ascetic's mantle. Through all the lanes went he backwards and forwards, and he found a sandal tree at the door of every one. He could not distinguish the doorway of the king from that of his subjects, though he went round them all. The village people said, 'Reverend Sir, stay with us. Every one of us will look after thy food.' But Gopí Chand said, 'O sisters and mothers of the village, show me the doorway of the king, for there will I stay. I cannot stay at the doorway of any of his subjects.' The sisters and mothers of the village replied. 'The turret is high, and the door is low. The doorposts are of gold, and the doors of silver. There are there two she-elephants named Aurá and Bhaurá, and a sandal tree which hath been withered for twelve years.'

7. So Gopí Chand went to his sister's door, and lit his ascetic's fire below it, and the sandal tree which had been withered for twelve years became fresh and green. The king and the subjects of the village saw this. 'It is not a mere ascetic. This is some God;

* सरनियाँ *lit.* protection.

† धूनै, an ascetic's fire.

maid-servant, 'Go my damsel, and ask his caste.' With folded hands the ascetic saith to her, 'Damsel, believe what I say. I am by caste a Chhatirí. Go thou and tell her that, and say "from his birth he hath been an ascetic of the highest degree *(siddha)*."' The damsel said 'Thou hast hidden thy caste, and hast done well.

for, lo, the sandal tree which hath been withered for twelve years hath become fresh and green' Mũ'gá (his sister's servant) said 'for the sake of the withered, withered, sandal tree, will I give the Bráhman food. The withered sandal hath become fresh and green. This is a wondrous ascetic.' With four companions in front of her, and four behind her, in the midst came his sister. She opened the doors of the window and beheld. One glance fell upon the ascetic, and the other on the sandal tree. The queen saw the withered sandal tree fresh and green, and fell in a faint.

8. Reverend sir; tell me what thou wantest to eat. Wilt thou eat cooked food of the king's house, or wilt thou eat milk and fruit ?* 'For twelve years, O damsel, I have never burnt my hands (by cooking). I will eat cooked food of the king's house, if it come in the hand of the Bráhman Baruá, nor also will I eat that which hath been touched by a maid-servant. My virtue as a Chhatirí would be destroyed. New troubles hath Rám given me. It was written in my fate that I should be an ascetic.'

8. The damsel Mũ'gá came to ask him, 'O ascetic, what wilt thou eat? Of what food wilt thou partake, wilt thou eat of the Rájá's food ?' Gopí Chand replied, 'A new calamity hath God granted to me. As I watch the smoke, the tears flow from mine eyes. As I see the fire, blisters are rising on my body. Tell the king's Bráhman to offer me food, and then will I eat.'

9. When she heard† these words the damsel went to give notice about the food, but she forgat.‡ She forgat also the other menial services, and no one paid attention to the food. At midnight the ascetic played his flute,

9. But the damsel Mũ'gá forgat to send the food amongst her other duties, and the Queen forgat to do so in her dressing and adorning of herself. Barú the Bráhman also forgat, as he ate his *bhang*. After a watch after midnight no one

* फरहार, The meal of an ascetic who will not eat corn,—only fruit.

† सोनि = सुन कर के.

‡ भोली = भूल गई.

and the sound fell upon (the ear) of his sister Birná.

took care concerning his food. In the meantime Gopí Chand played upon his flute. 'My sister hath, of surety, eaten and drunk. May my virtue increase by a fourth (if she hath not). She hath, of a surety eaten her meal and forgotten me. May all the food that is in the larder be burned to ashes. Then, even if she fill nine dishes, I will neither eat it, nor will my caste be affected (by accepting food from a maid-servant).' In the meantime his sister heard the sound of the flute.

10. Quickly she calls the damsel Mũgiyá saying 'An ascetic is fasting at the door. Quickly, O damsel, call the Bráhman boy, and tell him the state of affairs about the food.' * The damsel goeth and calleth the Bráhman. There were thirty-six dishes of thirty-six kinds (of food), not one was empty. She said, 'if thou desire, O Bráhman, thou canst feed a hundred princes. What difficulty is there about one ascetic?'

10. 'O Mũ'gá, all in my village have eaten, and the ascetic is fasting.' Saith the damsel Mũ'gá, 'what do I know?' She sent for Baruá the Bráhman and said to him, 'serve the food quickly to the ascetic.' Saith Baruá, 'what difficulty is there about one ascetic? I can feed fifty-six hundred princes.'

11. The Bráhman washed his feet, and opened the larder, and, lo, all the food in the dishes was burnt to ashes.† The Bráhman boy thinketh in his mind, 'what a wonderful thing is this that hath come to pass.' By the damsel Mũgiyá he sent the burnt food‡ of those dishes saying, 'conceal the name of the king's palace. Say "it is the food of my poor hovel."' The damsel Mũgiyá took it away, saying, 'Ascetic, may fire seize thy luck. The food of the house of my king is burnt up.'

11. He putteth on sandals of gold, and goeth and openeth the larder, and seeth that fire hath consumed the contents of the fifty-six dishes. If you were to squeeze out the contents of the fifty-six dishes, then only a fistful of burnt food would come out. Saith Baruá the Bráhman, 'O Mũ'gá, give the ascetic his food.' Mũ'gá was by caste an eater of broken food, but in her language she was intelligent. So she arrangeth cocoa-nuts, almonds, dates, raisins, and five

* जेवन = जेवनार.

† खंगार, ashes.

‡ करींदो = खंखारी, the latter is the B. word. It means burnt food of any kind adhering to the bottom of a dish.

packets of betel. She placed them on a golden dish, and tyre and the burnt food in a saucer, and taking Ganges water started. 'Take, O reverend ascetic, this food. May fire seize your luck.' The night was pitch dark. Up rose Gopí Chand in distress of mind. In a golden gourd he took the water, and in the golden saucer the food.

12. When the ascetic heard the words of the damsel, he laughed, and the thirty-two teeth of his mouth gleamed. By their light he taketh the burnt food, saying, 'what hath my sister given me?' The king (*i. e.*, the ascetic) tieth up the burnt food in the corner of his garment, and eateth the ashes and dust of his fire.

12. The night was pitch dark and in order to see his food Gopí Chand smiled. It was night but thereby (through the flashing of his teeth) it became day. He opened his sheet and tied up the burnt food in his knot. He drew towards him his fire and mixed the ashes with water. He laid them upon five leaves, and behold it became the five different sorts (of food).

13. Morning cometh, and the dawn beginneth. He batheth in his sister's tank. His cloth covereth the whole of his body, but the features of his face were not hidden. He mixeth ashes with water, applieth them (to his face), and standeth at his sister's doorway. He foldeth his hands and maketh supplication, 'O queen, give me alms. Then will I leave thy door.'

13. As morning cometh he batheth in the tank. He hideth his body under his garment, and applieth ashes and burnt cowdung to his face, that his sister should not recognize him, and that he might become as an ascetic. How the thirty-two teeth of Gopí Chand shine! How Gopí Chand deceiveth her! He had been all of one (dull grey) colour, but now (after bathing) his form became of eight colours. As the sun rose he went to his sister's door, and asked for alms. 'May my sister's children live long, and cause her to be happy.'

14. The damsel Mũ'gá gazed at his garments, and seeing the form and appearance of the ascetic went singing into the inner apartments. Saith she, 'O sister, as was thy brother Gopí Chand whom thou didst leave at home, such is the reverend ascetic.' 'Mũ'gá, may I eat up thy brother and nephew! *(a form of abuse)*. If it were my brother Gopí Chand who had come, then desolation itself would have been populated (with the crowd of his followers). (He would have taken with him) nine hundred horses, nine hundred elephants, nine hundred Mughal Paiṭháns, and nine hundred Paiṭhán princes.' Said the damsel Mũ'gá, 'if thou wilt not come with me

to see, I will buy a *damrí* or a *dokrí** of poison and eat it and die.' (Saith sister Birná to herself) 'of low caste is she, and by caste an eater of broken food. If I go not at once, she will take a *damrí* of poison and die, and I will be guilty of a sin.' So she put on her father's ring, her mother's painted scarf, and her sister-in-law's bracelet.

She maketh a mixture* of gold and silver, and goeth to give her brother alms. She sent it by the damsel Mũgiyá, saying 'Ascetic, take thine alms.'

15. The ascetic with folded hands maketh supplication. 'O sister, who careth for pebbles and stones (like these jewels which thou dost offer me). Hadst thou given me old clothes, for me to make a beggar's cloth of, (it would have been better, what can I do with money?).' 'My maid-servants and damsels get my old clothes. I have no clothes old enough to tear. I swear a hundred hundred thousand times by my brother that I have no old clothes.' When his sister said this to him, he answered, 'may thy brother king Gopí Chand die. Why art thou† taking a false oath?' As he gave this curse the ascetic moved away, but his sister caught him by the cloth and detained him. 'I will tear my royal robes and give thee a cloth. Why dost thou curse my brother. I call upon thy Guru a hundred hundred thousand times. Mayst thou be ashamed of having drunk thy mother's milk. Why hast thou cursed my brother?'

16. The ascetic claspeth his hand and giveth information about himself. 'Rájá Raghubansí liveth in Banká. I am grandson of Four companions went before her and four behind her. She took alms in a golden plate. 'Take, O Reverend ascetic, (these alms), and leave my door.'

15. 'I left all such pebbles and stones behind in my mother's house. If I take these pebbles and stones what can I do with them?' The sister replied 'I am offering him alms of gold and silver, and, lo, he hath turned them into pebbles and stones.' 'If thou hadst a shawl or double-shawl out of which I might make an ascetic's garment (I might take it.)' 'The reverend ascetic will take nothing. Take not so terrible a resolution (*literally* oath). O leave my door. I have no cloth worthy of thee.'

* खिचड़ी *lit.* a mixture of *dál* and rice, hence of any yellow and white things.

† बाप्रक 2nd pret.

* Two small coins.

Tirlokí Singh. I am the son of Bhawandá Singh. O blind sister, I am thine own* brother. In thy good fortune thou hast become blind. Thou didst not recognize thine† own brother.'

16. When Gopí Chand heard this, he said, 'thou hast obtained wealth, and forgotten me. Dost thou not know thine own brother, born from the same womb as thou. I am thine own brother of thy father's house.'

17. When she heareth this, his sister saith, 'Hear, O Damsel, my words. This man is not worthy to be my brother. Twelve hundred princes are servants in my father's palace. This ascetic is one of them. He knoweth the names of my brother and my father. If my brother Gopí Chand had come, four hundred Tájí and Turkí horses would have come out with him. The dust would have flown (to the skies) on account of his elephants. Who would (be able to) count the number of his foot-soldiers? Desolate cities would be re-populated by them, if my brother Gopí Chand had come. There is the mark of a pen‡ on my brother's hand.' (She saith to the ascetic), 'How much *Tilak*§ did my brother give (my husband)? How much dowry did he give?' 'O sister, I gave a hundred hundred thousand *Ashrafis* as a *Tilak* and the elephant Bhãwará at the *Duár Pújá;* I gave carts and waggons laden with gold. Who can count the brass vessels‖ I gave. I did not sum up the account of the cash I expended. My wife's bracelet shineth on thy wrist. My father's ring gleameth on thy finger. Thou art wearing a checked cloth of thy father's house.¶

17. 'I will know thee as my brother, if thou wilt tell me what presents I got at my marriage.' Saith Gopí Chand, 'behold, thy father's ring is shining (on your finger), and thy mother's painted scarf, and thy sister-in-law's bracelet.'

* सग = सहोदर.

† उदरी = सहोदर.

‡ *I. e.* He is a scholar, and knows how to write.

§ Regarding *Tilak* and *Duár Pújá*, see Bijai Mal, *vs.* 104, & ff.

‖ कँसरँड़ = काँसा + ढाँड़ा.

¶ बाड़िस, ✓ बाट. चित रङ्ग, = चित्र रङ्ग. Compare चित सरिया in the song of Bijai Mal, *vs.* 576. In the Magahí version of this poem (paras. 15 and 18) the word is चिट सारी a checked robe. In Bijai Mal, however, the phrase is said to mean a painted room.

18. When his sister heard these words she ran as a calf that hath broken loose runneth towards its mother. The brother and sister embraced, and all the leaves of the forest fell down (out of emotion). 'I would make and give my brother food, then would I ask him news of my father's house.

18. When his sister Birná heard this, she caught him by his garment, crying, 'my mother is deserted,* and my brother hath today become an ascetic. Sit down, sit down, O brother, on the silk-covered throne, and let me send for all the wealth of the world and give it to thee.'

Hath a Nawáb General invaded and snatched away thy kingdom? I will equip an army and send it against him, and rescue thy kingdom from him.' 'No, sister. No Nawáb General hath invaded and taken my kingdom. It was written in my fate that I should be an ascetic. I will not eat food, O sister, at thy hand. Now my hand is empty.* Sister Birná, look at the food (which was given me) last night. What didst thou give me. My luck was burnt, and thou didst show unto mine eyes† burnt food. The burden‡ hath been removed from thy city.' The ascetic untied and showed the burnt food to his sister, and then her heart burst and she died.

'At thy door, O sister, what can I do? If I had two or three pice I would have bought bangles and given them to thee.†' Then said her husband's mother and sister. 'Last night didst thou eat of food which had been touched by the hand of Mũ'gá. And now that thou hast been recognized, thou dost obstinately persist (in refusing to accept our hospitality)'. When his sister Birná heard what things and of what kind he had eaten, and when she saw, in the knot of his sheet, the burnt food, she cried, 'woe is me', and died.

* He reproaches her with her scurvy treatment of him, when she thought he was a Jogi. खूँख means 'empty.' In regard to food, and especially rice, it idiomatically means 'plain,' *e. g.* खूँख भात खाई, 'Am I to eat rice and nothing else?'

† खोरिया = खँखोरी.

‡ *I. e.*, a beggar is like a burden to the city, and this is the way you have tried to get rid of him.

* विरोगिन is a corruption of वियोगिन.

† A brother is by custom always bound to give his sister a present when leaving her house after a visit.

19. King Gopí Chand considereth in his heart, the words of my mother have come true. He draweth from his waistband knives and daggers, and putteth them to his throat. But God above seized and stopped him, saying, 'Why, O my ascetic, dost thou kill thyself. There is ambrosia in thy finger.' So he split his finger and gave his sister (ambrosia) to drink (and she came to life again). Then the ascetic went off on his wanderings.

19. (Saith Gopí Chand to himself), 'Let me strike myself with knife and dagger, and let the brother die in the place of his sister.' Then up came Náráyaṇa in the form of a Bráhman, and caught hold of him, crying, 'Ho, sinful one, in thy little finger is ambrosia. Give it to thy sister to drink; and thy dead sister will come to life; and do thou take the form of a bee, and go away and be an ascetic.' *(Here the sister is supposed to come to life, and Gopí Chand to go away.)*

20. His sister arose and sat up. Through every lane she wept. She caught the sandal tree and wept; and the sandal tree replied, 'Why dost thou weep? Thy brother hath become an ascetic.' Then cried the sister, 'woe is me', and the earth opened and she entered into it (and was swallowed up by it). And thus was broken the relationship of brother and sister between these two.

On some more Copper Coins of Akbar.—*By* Chas. J. Rodgers, *Principal, Normal College, Amritsar.*

(With a Plate.)

When in 1881 I wrote a paper on the Copper Coins of Akbar, it was with much diffidence that I put forward any views of my own. Those views were in fact only deductions from the coins I had before me. Mr. Thomas in a short but friendly paper opposed my deductions. He corrected the reading of one coin from *dám* to *damrá*. I need not say that I knew the inscription would bear this interpretation. I had, however, never seen this word in any books on Indian coins, not even in Mr. Thomas's most exhaustive treatises. I quite agree with him that a *damrá* may be two *damrís*. I was attacked somewhat personally by an anonymous writer in the *Pioneer* who evidently had not been guilty of such patient research as myself. He said Akbar never struck coins bearing the word *tánke*. A look at my plates must have upset his unfounded assertion.

I have, however, to plead guilty of making another mistake. I read a word on several coins as *sikka*. This word, General Cunningham has

kindly pointed out to me, should be *tankah*. I quite agree with this correction and am very thankful to the General for the kind manner in which he brought it to my notice. One other reading was also corrected. Here my coin was in fault. I read it *Zarb-i-Illahábás*. On the plainest coins it is certainly *Muhr-i-Illahábás*. It is seldom perhaps so many mistakes are made in one paper. I can only plead the fact that I was busy in making preparations for my furlough and that I had not time to consult my more learned and experienced fellow-numismatists. None, however, of my critics give me credit for introducing to notice so many novelties. A careless perusal of my short paper will show that I proved the *fulús* to be a coin of uncertain weight, that I gave a *yak tánke*, a *do tánke*, a *damrá*, a *damrí* and several *tankahs* besides the coins of several mints up to that time unpublished and of several up to that time unknown. This I mention to show that my paper was not without some value in spite of its faults. Since 1881, I have kept up my researches and am able now to give a new series of coins which I shall leave to speak for themselves.

The coins I have drawn are all of pure copper. Some are very thick as will be seen from the plate where the two lines under the coins indicate their thickness. The weight of each is given under it in grains.

They are as follows (see Plate I) :—

(1.)	*Obv.*	ضرب بيرات تنكه اكبر شاهي	*Rev.*	اردي بهشت ٤٥ الهي
(2.)	*Obv.*	Ditto	*Rev.*	اسفندار مز ٤٤ الهي
(3.)	*Obv.*	ضرب بيراته نيم تنكه اكبر شاهي	*Rev.*	خور داد ٤٤ الهي
(4.)	*Obv.*	Ditto	*Rev.*	ماه تير ٤٤ الهي
(5.)	*Obv.*	چهارم حصه تنكه اكبر شاهي	*Rev.*	ضرب آگره اسفندار مز ٤٥ الهي
(6.)	*Obv.*	هشتم حصه تنكه اكبر شاهي	*Rev.*	ماه ابان ٤٦ الهي
(7.)	*Obv.*	دهم حصه تنكه اكبر شاهي		
		ضرب دهلي شانز	*Rev.*	ماه فروردين ٤٢ الهي
(8.)	*Obv.*	ditto (without mint)	*Rev.*	ماه تير ٤٤ الهي
(9.)	*Obv.*	same as (7)	*Rev.*	ماه مهر ٤٦ الهي
(10.)	*Obv.*	نصفي	*Rev.*	geometrical figures.
(11.)	*Obv.*	نصفي	*Rev.*	ditto.
(12.)	*Obv.*	ضرب — تنكه اكبر شاهي	*Rev.*	خور داد ٤٤ الهي
(13.)	*Obv.*	مهر الها باس	*Rev.*	سنه ٣١ الهي
(14.)	*Obv.*	يك تنكے اكبر شاهي	*Rev.*	ضرب كابل اسفندار مز ٤٦ الهي

Of these coins Nos. 1, 2, 12 are the property of my venerable and kind friend General Cunningham, No. 11 is from an impression by the same gentleman at Lucknow in 1840, and given to me some years back.

No. 3 is the property of Dav. Ross, Esq., C. I. E., M. R. A. S., &c. Traffic Manager Sind, Panjab and Delhi Railway. No. 14 belongs to L. White King, Esq., C. S., a most indefatigable numismatist. The remainder are from my own poor cabinet.

By comparing this list of coins with that published in my former paper, it will be seen that of Akbar's Copper Coins we have, now, knowledge of the following :—

		weights in grains.
The one tánke	یك تانکے	59
The two tánke	دو تانکے	108, 109.
The one tanke	یك تنکه	58·8.
The damrí	دمری	40.
The damrá	دمرا	76.
The fulús	فلوس	326, 149, 38, 37.
The mohur	مهر	316.
The tankah	تنکه اکبرشاهي	618, 620, 623·4, 626.
The half tankah	نیم تنکه	317·5, 309.
The fourth part of the tankah	چهارم حصه تنکه	153·1.
The eighth part ditto	هشتم حصه تنکه	39·5.
The sixteenth part ditto	شانزدهم حصه تنکه	37·5, 38·5.
The nisfe	نصفے	154·5.

I know of only one one-*tánke* piece and of only one one-*tanke* piece both of which are given in my papers, and neither of which belongs to me. I have seen only one *nisfe* and one-fourth part of a *tankah* and one eighth part. Sixteenth parts are common. I have about a dozen of them. The *tankah* is as rare as it is large. The halves are still rarer. The two given in my paper are the only ones I have yet seen. The cabinets of other numismatists and of museums may contain others. Of the *mohur* one specimen is published by the Honorable Syud Ahmad, C. S. I., in his edition of the *Aín-i-Akbarí*. But in a conversation I had the other day with him, he disputed this reading, and was inclined to my former reading *zarb*.

I am not going to bring forward any views of my own on this occasion, or make any deductions from the coins. I will simply quote a letter sent me by General Cunningham, after we had discovered the *tankah* and its parts, and thus fixed the weight of this coin.

Simla, 5th July, 1883.

My dear Rodgers,

Ever since we got the Tanka of Akbar *fixed* I have been thinking of Akbar's revenues, and at last I *think* that I see some light.

Thomas began his reasoning with an assumption that "there can be very little contest about the value of Nizám-ud-Dín's pieces designated as Tankah-i-Murádí." He takes them to be the same as the old Sikandarí tanka of twenty to the rupee (p. 7, Akbar's Revenues) which is certainly wrong. He *assumes* that they were so; but gives no proofs, nor even any arguments.

Now let us examine the facts:—

De Laët gives Akbar's revenue on Jahángir's accession in two forms: thus:—

VI. Arab et 98 caror Dám.

or III. Arab et 49 caror *Tangarum.*

Now here is a new proof of 1 Tanga = 2 Dáms.

	Arabs	kross	tákhs.		
Abul Fazl's collected amounts come to ...	5,	67,	63	83,	383 dáms.
Nizám-ud-Dín's statement ...	6,	40,	00	00,	000 murádí tankas.
De Laët's statement ...	6,	98,	00	00,	000 dáms.

Put in this way it seems clear to me that Nizám-ud-Dín's *murádí tankas*, are the common dáms of Akbar. I do not understand the name of *Murádí*, but I think it possible that there may be a mistake in this name; and for the following reason:—

I have two copper coins of Akbar, like your No. 15,—but both of them used مهر *muhr* instead of *zarb*. *Muhr-i-Ilahábás*, the stamp or coin of *Ilahábás*. (See No. 13 of my present plate, which I have drawn from a perfect coin of my own two, illustrate this portion of General Cunningham's letter.) The name of the coins would then become مهراوی Muhráwí, and hence I take them to be the real pieces intended by the corrupt name of *Murádí*. Can you refer to any MS. of the Tabaqát-i-Akbarí?

Had Nizám-ud-dín intended the *tankas* of Akbar, there was no necessity for calling them by any other name than simply *tankas*, as written on the coins themselves. But as *dám* was a new name, introduced by Akbar himself, it seems highly probable that the coins of the same weight as Akbar's *dáms* were previously known as *tankas* with some qualifying title. (In fact Sher Sháh's 320 grain coins *were called tánkas.*)

(By the way my two heavy (640 grain) tankahs of Akbar are not from your Dehli mint but from Bairát, as I read the name—I will of course send them to you.)

Now as to Akbar's revenue. Turn to Thomas, p. 52 and add up Sháh Jahán's revenues from the same provinces as Akbar held. The

total is 18 krors + 50 lacs of rupees. Now compare the progressive revenues in krors and lakhs of rupees.

		Krors	lakhs.	
Akbar	Abul Fazl	14,	97	
	Nizám-ud-Dín	16,	00	
	De Laët	17,	45	
	Sháh Jahán	18,	50	
	Same provinces			
	Sháh Jahán later	22,	00	
	Aurangzeb	26,	74	
	Ditto	35,	64	
	Ditto	38,	62	
	Ditto	30,	17	after loss of provinces.

Now these figures of progressive revenue show incontestably that Akbar's revenue could not have been more than 16 krors,—and the double statement of De Laet, in *tankas* and *dáms*, is specially clear and serves to fix the value of Nizám-ud-Dín's *Murádí tankas* as simple *Akbarí dáms*.

I am,

very sincerely yours,

A. Cunningham.

I, on my own part, would only draw attention to the fact that these *tankahs* of Akbar, and the different parts of the same coin, seem to have been all struck in the last ten years of his reign, between 40 and 50 Iláhí. The weight of the نصفی seems to make it as a *half dám*. At the same time I must say I have never yet seen a coin with the name *dám* on it. The Honorable Syud Ahmad told me he had seen one.

From the weights given above, it would seem that the *tankah* weighed about 640 grs. The half 320, the quarter 160, the eighth part 80, the sixteenth part 40. Against this, however, we have the weights of two coins published in my former paper Nos. 18 and 19 of Gobindpúr and Dogám which are called *tankahs* and weigh 327 and 319 grains. The Bairát* *tankahs* and *half tankahs*, the Ágra *quarter* and the Delhi

* For interesting facts regarding *Bairát*, see the Reports of the Archæological Survey of India, Vol. II, pp. 342-6, and Vol. VI, pp. 91-103. It was famous for its copper mines. I am ignorant of the position of *Dogám*. There are several *Gobindpurs*. We want sadly a *Historical Geography of the Muhammadan period*. Conquerors changed the names of places. The names remained for a time and were allowed then to fall into disuse. Thus *Adúní* was called by Aurangzeb *Imtiyázgurh*. Rupees were struck bearing this latter name. I have seen several though I possess none. I should like to know where *Alamgírpúr* is, and a lot of other places.

sixteenth parts, however, show that in other parts of the empire there was one acknowledged standard weight for the *tankah*.

I do not intend this paper as an answer to the kind papers of Mr. Thomas and Mr. Keene. It is rather an apology for my former paper and its mistakes, and is intended as an additional contribution to our knowledge of Akbar's copper coinage. I do not know the date of the completion of the *Áín-i-Akbarí*, but in it a very incomplete account is given of Akbar's copper coinage. Our cabinets, however, provide us with coins of the whole reign from the 963 year coins of Nárnol to the 50th Iláhí year coins of Ágra. It remains for historians and revenue officers to discuss the matter in the light these new coins give.

I may add that the Áín Akbarí gives many subdivisions of the rupee of Akbar, and that as my cabinet contains specimens of each piece, I shall, if I can find time, give a plate of these subdivisions.

P. S. Since the above was in press I have visited Ágra, Muttra and Delhí and have obtained two Ágra *tankahs*; several *nim tankahs*, one of Ágra; two *chhárum hissa i tankahs*, and one Kábul *do tanke* piece. All these tend to confirm what I have advanced in this paper.

Some Coins of Ranjít Deo, king of Jummú a hundred years ago.—By Chas. J. Rodgers, *Principal, Normal College, Amritsar.*

(With a Plate.)

In the first year of the present century Ranjít Singh "the Lion of the Panjáb" conquered Lahore. For many years after that event, he was so constantly engaged in subduing the whole of the cities and states of the Panjáb that his name and fame seem to have hidden altogether the name of a better man who bore the name of Ranjít Deo and who ruled in the hill state of Jummú or Jummúṇ as we shall see from coins.

Writing of Jummú, Mr. Frederick Drew in "The Northern Barrier of India"* says: "A century ago the old regime was flourishing under Rája Ranjít Deo; he is still spoken of with the highest respect as a wise administrator, a just judge, and a tolerant man. At that time the direct rule of the Jummú Rája hardly extended so much as twenty miles from the city; but he was lord of a number of feudatory chiefs, of such places as Akhnúr, Dalpatpúr, Kiramchí and Jasrotá, all in the outer Hill tract, chiefs who governed their own subjects, but paid tribute to and did military service for, their liege lord of Jummú.

* Chapter III, pp. 40, 41.

"During a portion of the year they would be present at that city, attending the court of the ruler and holding separate ones themselves. At this day various spots in the town are remembered where each of these tributaries held its court on a minor scale. Doubtless there was some petty warfare, resulting sometimes in an extension and sometimes in a contraction of the power of the central ruler; but usually the chiefs were more occupied in sport than in serious fighting, and, in fact, the various families had continued in nearly the same relative positions for great lengths of time."

"From the time of Ranjít Deo's death the fortunes of Jummú became more dependent than before on the world outside the rugged hills, the result being a change in, and at length almost a complete break-up of, the old system of government."

Mr. Drew does not tell us when Ranjít Deo ascended the throne or when he died. He adds in a foot note "Ranjít Singh was of the Jaṭ caste, and was in no way connected with Ranjít Deo or with any of the Dogra tribe." We learn, however, from the "History of the Panjab,"* Vol. I, p. 219, that in 1762 A. D. Ahmad Sháh Durráni after almost annihilating the Sikhs in an engagement near Ludhiana, a disaster "characterized in Sikh tradition as the *ghulu ghara* or bloody carnage," "his attention was turned towards Kashmír where his governor Súkh Jewan had for nine years conducted the administration without remitting any portion of the revenues to the royal treasury. The co-operation of Ranjít Deo, Rája of Jummú, having been secured, with some difficulty, a strong detachment was sent from Lahore, under the command of Núr-ud-Dín, and the Rája conducted it across the Pír Panjál mountains into the valley, which submitted after a slight resistance. Súkh Jewan being made a prisoner was punished with the loss of his eyes. Ahmad Sháh, having made these arrangements to secure his territory east of the Indus, returned to Kábul at the end of the year 1762 A. D."

The same writer tells us on p. 237,—"The Hill Rája of Jummú Ranjít Deo, had a misunderstanding with his eldest son, Brij Ráj, and desired to set aside his pretensions to the succession in favour of the youngest, Mián Dulel Singh. In order to secure his hereditary rights, Brij Ráj broke into rebellion, and applied to Charat Singh,† offering a large yearly tribute, on condition of his aiding to depose his father. Charat Singh having an old enmity against Ranjít Deo, closed with the offer, and strengthening himself by association with Jai Singh of the Ghania Misl, their united forces marched into the hills, and encamped at

* London, Wm. H. Allen and Co., 1846.

† The father of Máhá Singh and grandfather of Ranjít Singh.

Udhachar, on the banks of the Basantar river. The Rája having timely notice of the designs of the heir-apparent, had made corresponding preparations for resistance. The defence of the capital he reserved to himself, but collected a force to oppose the invasion, composed of auxiliaries from Chamba, Núrpúr, Basehar, and Kángṛa, in the hills, to which were added, besides a party of his own troops, the confederated forces of the Bhangí Misl, under Jhandá Singh, whom he induced to lend his services in the extremity. The two armies lay encamped on opposite sides of the Basantar, and in a partial skirmish between the Sikh auxiliaries Charat Singh was killed by the bursting of his own matchlock.

He was 45 years of age, and had risen from a common Dharwí or highway man, to be Sardár of a separate Misl, with a territory computed to yield about three lakhs of rupees. He left a widow, Desan by name, with two sons and a daughter, called respectively Máhá Singh, Subuj Singh and Ráj Kanwar. The eldest son, Máhá Singh, then ten years of age, succeeded to the Sardárí; but the widow and Jai Singh Ghanía assumed the immediate direction of affairs. It was determined by them to assassinate Jhandá Singh Bhangía, who was the mainstay of the Jummú Rája's party, and the avowed enemy of both the Sukar Chakía and Ghanía Misls. A sweeper was tempted by a large bribe to undertake this hazardous enterprise, and he succeeded in effecting his purpose by firing at, and mortally wounding the Bhangí chief, as he was walking unattended through the Jummú camp. The Sukar Chakía and Ghanía Sikhs being satisfied with the revenge thus taken, withdrew soon after from the enterprise in which they had been engaged. The Bhangí troops had simultaneously left the opposite camp on the death of their chief. Thus Brij Ráj Deo was left alone to settle with his father, his rights of inheritance to the Ráj: before the departure of Máhá Singh, however, he went through the ceremony of an exchange of turbans with Brij Ráj, which bound him to brotherhood for life. These events occurred in 1774 A. D."

Ráí Kanhiyá Lál, Bahádur, in his Urdú History of the Panjáb, Lahore, 1877, gives some further particulars (p. 119) of this matter. He says that in those days the city of Jummú was regarded as the abode of peace and safety, that bankers and merchants had fled from the Sikh-spoiled plains of the Panjáb and had taken refuge in Jummú where Ranjít Deo was too strong for the Sikhs to attempt anything against him. He gives the name of the battle as Dású-suhára in the government of Zafarwál. The sweeper, he says, was a Mazhabí khidmatgár. (The Mazhabís* are sweepers, but they have always been an honoured

* The word *mazhabí* means religious.

and trusted people since 1675 A. D., in which year some sweepers rescued the mutilated body of the Gúru Tegh Bahádur from the streets of Dehlí where it had been exposed by Aurangzeb. We have several regiments of Mazhabí Sikhs in our Indian army at the present day, and their deeds in arms show that "trust breeds trust.") He adds that Ranjít Deo gave Jai Singh 150,000 rupees for the assistance he had rendered. But here as in other places he gives us no clue as to when the event happened. There is a dispute as to whether this affair took place in 1771 or 1774. The latter date seems to be supported by the best authorities. The histories of Kashmír that I have consulted say nothing at all about Ranjít Deo.

Jummú figures little in history after this. In 1812 A. D., Ranjít Singh, although busy with his plans for obtaining the Koh-i-Núr diamond from the blind refugee Sháh Zamán, found time for making arrangements for the conquest of the hill states south of the Kashmír valley. Jummú was captured by his newly married son Kharrak Singh, says Cunningham in his History of the Sikhs. Kanhiyá Lál says* that Díwán Bhawání Dás took Jummú from the Pahárí Dográ Ḍeḍo in an expedition which lasted only one month. He also tells us† that Kasúr Singh the father of the three brothers who made such a figure in the court of Ranjít Singh,—Dhyán Singh, Guláb Singh and Suchet Singh—was a descendant of the Rájas of Jummú. In Macgregor's History of the Sikhs, Vol. I, p. 168,‡ we read "During this year (1812), Bháí Rám Singh, who was the Peshkár of Kharrak Singh, received Jummú in jagír." From these three somewhat different accounts we may learn that Jummú was conquered by the Lion of the Panjáb in 1812.

In the Urdú Táríkh-i-Makhazan-i-Panjáb by Gulám Sarwar published by Nawwal Kishore we have without dates a genealogical table which is interesting although I cannot vouch for its correctness, and which is given at the end of this paper.

The author tells us that in the time of Brij Ráj Deo matters were in the greatest confusion in Jummú. He does not tell us whether he had any family or not. The Dográ Rája Ḍeḍo mentioned by Kanhiyá Lál may be his son. I regret that I can give no dates and so little information about Ranjít Deo. I think, however, that I have shown who he was and the position that he held in the Panjáb at a time when its history is little known. The time in which he lived was one of utter lawlessness, yet his little state was the abode of peace and safety (دارالامان). The Afghán Ahmad Sháh had overrun the Panjáb.

* Urdú History of the Panjáb, p. 209.

† *Ibid.*, p. 259.

‡ London, James Madden 1846.

The Sikh Misls, twelve in number, were then rising into power, and as each one rose, it strove to overpower all the others. In Dehlí, a blind king was on the throne, and his servants misruled the country on their own account, and murdered each other according to their own sweet wills. Nevertheless during all this misrule, the coins of the empire were struck in the name of that blind king Sháh Álam II. I have rupees of every year of his struck in Dehlí and other places, and he reigned 49 years. Some time ago I obtained a rupee of his 24th year. The inscriptions on it are (see plate I, fig. 1.)

Obv. سکه شاه عالم بادشاه غازي ۱۱۹۶

Rev. ضرب دارالامان جمون سنه جلوس میمنت مانوس ۲۴

This coin I attribute to Ranjít Deo. It was struck as we see at Jummoo in the name of Sháh Álam. The year is that of the Hejirah, and the year of the reign corresponds. Sháh Álam's rupee of the 1st year is dated 1174. But he may be said to have commenced his reign in 1172. The Dehlí rupee I have of his 23rd year is dated 1195 A. H. This Jummoo rupee of the 24th year is dated 1196 A. H. The 26th year is 1197, the 27th 1199, and the 28th 1200. So that this Jummoo rupee takes its place in quite a correct manner in the list.

It will be noticed how the title of the city "*Dár-ul-Amán*" the "*Gate of safety*" agrees with the description of its condition under Ranjít Deo as given above by Rai Kanhíyá Lál.

Whether Ranjít Deo acknowledged the sovereignty of Dehlí or not, I cannot say. His rupee has on it the name of the nominal suzerain of India, a name found on all the coins of the East India Company and on coins struck at Muhammadábád (Benares), Indarpúr, Mustaqir-ul-Khiláfat Ágra, Ahmadnagar Farrukhábád, Murádábád, Dehlí, Muhammadnagar, Dár-ul-Barakát, Dár us Sarúr Saháranpúr, Najíbábád, Barellí, Lutfábád Barellí, Tírath Hurdwár, Muzaffargarh, Arcot, Maheswar (= Maisore). I have not yet found a coin of Sháh Álam II struck in Lahore or in any mint of the Panjáb proper. As I showed in my paper on "The Coins of the Sikhs," the Sikh Commonwealth commenced striking rupees in A. D. 1765, a practice which they continued with few interruptions under their many rulers up to A. D. 1849, in Lahore, Amritsar, Multán, Pesháwar, Kashmír, &c.

However shortly after this in the 27th year of Sháh Álam II, we find Ranjít Deo striking coins at Jummú in his own name, on which he uses the Sambat year, but strange to say, still retains the year of the reign of Sháh Álam, and on which he places the symbol of imperial power—the umbrella—so frequently occurring on the coins of that suzerain.

See Plate I, fig. 2.

Obv. I can't decipher this

رنجیت دیو آباد کرد (ن not present).

سمبت ۱۸۴۱

Rev.

ضرب دارالامان جمون سنه ۲۷

جلوس میمنت مانوس

fig. 3.

Obv. Same as fig. 2, but with addition of حار below رنجیت which word is in full.

Rev. Same as No. 2, but year ۲۸

fig. 4. *Obv.* and *Rev.* same as fig. 3 with variations.

1196 A. H. corresponds with 1781 A. D., and is on the coin the 24th year of Sháh Álam. The Samvat year 1841 corresponds with 1784 A. D., and is on the coins the 27th and 28th years of Sháh Álam. These coins therefore were struck about 10 years after the disagreement Ranjít Deo had with his son. They are the only coins of Ranjít Deo I have yet met with during many years of continuous search. They show us what valuable aid coins may give us in unravelling and illustrating history.

Of the title of the city of Jammú found on the coins, دارالامان Dár ul-Amán, we may incidentally remark that the same title is found on some of Humáyun's anonymous coins struck at *A'gra*. It was also the title given to *Multán* more because of the rhyme than the reason. We find it on the rupees of Aurangzeb and his successors, and also on the coins of the Sikhs struck at Multán. The strong fort of this place may, however, often have afforded shelter to the people of the western Panjáb where it was the only stronghold of any size or importance.

The numbers under the coins indicate their weight in grains. Five rupees struck at five different Indian mints of Sháh Álam average I find 171·3 grs. So that the Jummú rupees had nothing to do with the old silver coinage of Kashmír but were coins of the Empire, over which Sháh Álam exercised nominal sovereignty.

Since writing the above I have had lent me "A History of the Reigning Family of Lahore with some account of the Jummoo Rajáhs" by Major G. Carmichael Smyth, Calcutta, W. Thacker and Co., 1847, a book published by subscription and now very rare. The author supplies what no one of the authorities I quote from gave me the *dates*. Ranjít Deo was born in 1724 A. D. He ascended the throne in 1742 and reigned "in peace and prosperity till 1780 A. D. when he died."

The only matter not noticed by the authorities I have used, but described by Major Smyth is that Ranjít Deo was imprisoned by the governor of Lahore from 1749 to 1760 A. D., when he escaped on a horse no one could tame except himself. After visiting his mountain home, however, he returned to Lahore and to captivity, but the governor was so much struck with this noble conduct he allowed him to return to Jummú.

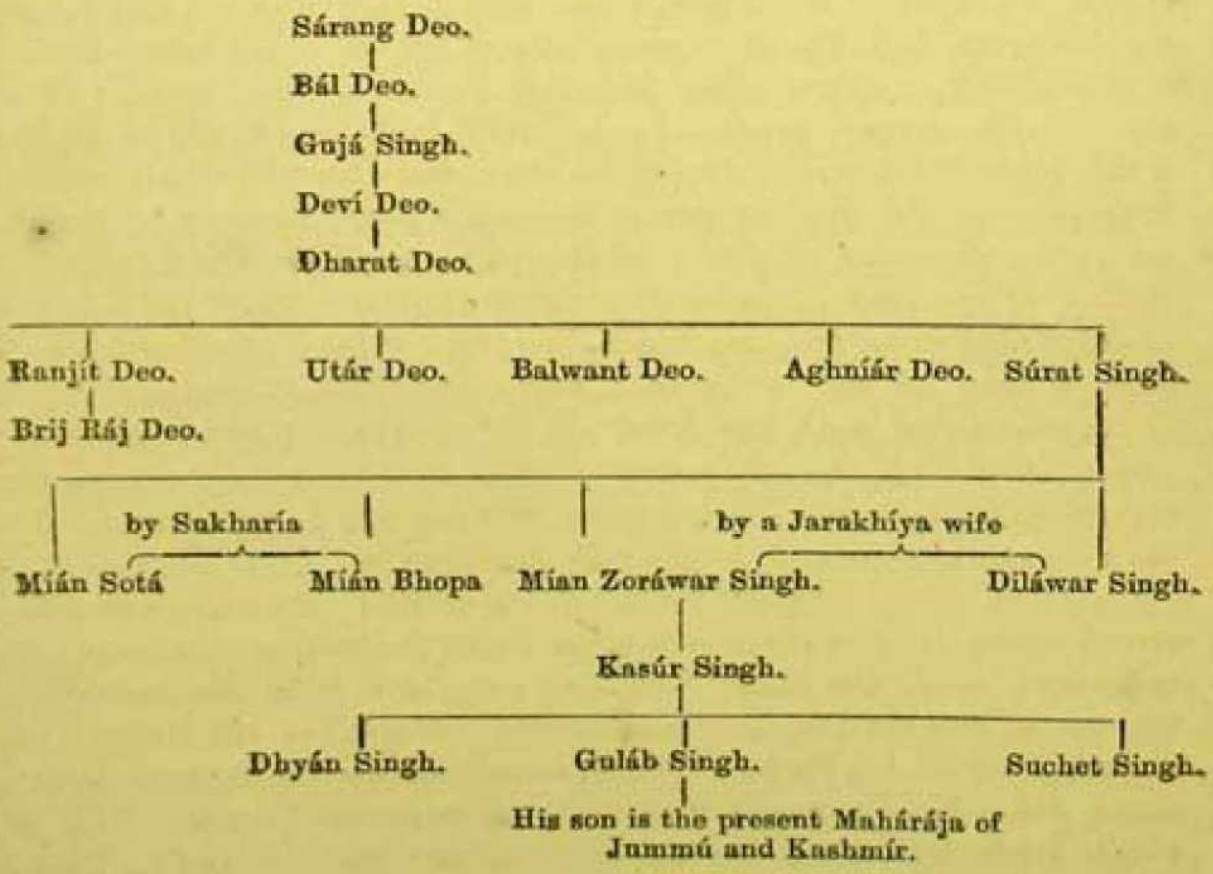
P.S.—I have just obtained some more specimens of the coins of Ranjít Deo. From a comparison of five I am able to complete the deciphering of the inscription on the obverse. It is as follows :—

خانه رنجیت دیو آباد کرد
چمي نراین دل شاد کرد

which may be literally translated thus :—

Ranjít Deo peopled this part, Lachmí Naráin made glad its heart.

GENEALOGICAL TABLE (see p. 63).



The Coins of Ahmad Sháh Abdálli or Ahmad Sháh Durráni.—*By* Chas. J. Rodgers, *Principal, Normal College, Amritsar.*

(With Plate II.)

The Panjáb, the Border land of India has been invaded oftener than any other country in the whole world. The more than dozen incursions of Mahmúd of Gazní, the five or six of Muhammad Gorí, the terrible visitation of Taimúr, the plundering expedition of the execrable Nádir, and the frequent invasion of Ahmad Sháh the conquerors of the Mahrattas at Pánípat were all borne by the Panjáb. Scarcely any other part of India suffered from them, or if they did, the Panjáb suffered both before and after. No good accrued to any province of India from any one of these inflictions. The work done by each of these scourges was one of destruction and not of construction. No public works attest the presence of these mighty ones in India. And yet each one has left behind him some sign of his hated though short rule. Mr. Thomas has edited the coins struck in India by Mahmúd and his successors, and those of Muhammad Gorí. I myself edited in a late paper the only known Indian coin of Timúr, a miserable copper damrí. In my late furlough I edited the coins which Nádir Sháh struck during his short and disastrous visit to Dehlí. I propose in the present paper to give a short account of the coins which the successor of Nádir Sháh,—Ahmad Sháh Abdállí struck in India. If we bear in mind that the striking of coins in India is a prerogative of royalty, and one which has always been exercised the moment a man sat on the throne; moreover if we remember that the mint was carried with the royal camp,* we shall at once see that if we collect specimens of each year and of each mintage, we shall have a chronological account if the events of the reign in coins: we shall also see the expansion of each king's rule or otherwise.

Ahmad Sháh invaded India several times. On each occasion he struck coins. If in a place only a few days, the numismatic records are not silent about the visit. The king may have been dominant before his coming and after he had gone. But during the time the invader stayed, he coined. Hence we often have coins struck in one year at the same place by the conquering and the conquered ruler. This it is which lends interest to the coins of Ahmad Sháh Durráni. They are not old. But they are becoming rarer every day. Indeed it is seldom they are now met with. As they are the only relics of the man who

* I have lately become possessed of a dirham of Bábar's struck in the camp (Urdú اردو). *Urdú Zafar Qarín* is a common mint of Akbar's.

saved us the trouble of destroying the Mahrattas, and as they illustrate his movements in India so exactly, I have deemed it worthy of me as a numismatist to rescue the coins from oblivion and the inevitable melting-pot.

Ahmad Sháh was no relative of Nádir Sháh. He was by birth of the Abdállí tribe and was probably born at Multán. The Abdállí tribe trace their origin to a descendant of Abraham named Qís who flourished in the time of Muhammad, and who embraced the doctrines of Islám. I do not think this the place to go further into this matter. Suffice it to say, that Ahmad Sháh was the most trusted of all the members of the court of Nádir. Nádir was not happy with respect to his own children. During his lifetime he is said to have told Ahmad Khán that after his death, he would be king.

Nádir Sháh was slain by his officers on the 11th of Jamádí-ul-Ákhir 1160 A. H. The next day Ahmad Khán defeated the conspirators, and possessing himself of all the treasure of his murdered master, fled to Kandahár. There is a story told by the historian of Ahmad Sháh that, when Ahmad had performed two days' journey towards Kandahár, a faqír named Sábir Sháh with whom he had been previously intimate, approached him and said "Now Ahmad Sháh you are indeed king." When the king said that he had not yet been crowned, the faqír making a platform of earth led the king to it, and taking some grass put it on his head, saying, "This platform is your throne and this grass your crown. I proclaim you king by the name of Ahmad Sháh Durrání." This name the king adopted instead of his former tribal name Abdállí. Durr is a pearl. Ahmad on some of his coins styles himself Durr-i-Durrán the pearl of pearls. This Sábir Sháh at first stayed with Ahmad, but being sent on a message to Lahore, he was there murdered.

Arriving in Kandahár Ahmad Sháh was formally crowned. He ordered coins to be struck bearing the following couplet:—

حکم شد از قادر بیچون باحمد شاه
سکه زن بر سیم و زر از اوج ماهي تا بماه

Immediately afterwards we find him on his way through Gazní to Kábul which he reduced, and afterwards he obtained possession of Pesháwar, whence he returned to Kandahár. Settling his affairs there and hastily collecting an army of about 12,000 horse with which he entered the Panjáb, he was before Lahore, ere the letter containing an account of his invasion had reached Dehlí. The Governor of Lahore fled, and all the arsenal fell into the conqueror's hands. He did not let the grass grow under his feet. Meanwhile the worn-out Mogul Muhammad Sháh sent his son and prime minister Qamar-ud-Dín to

dispute his progress. The armies met at Málúpúr, six kos from Sarhind. There were skirmishes for several days, during one of which the prime minister Qamar-ud-Dín was killed. In a general engagement which ensued, the Afgháns bethought them of some rockets they had found at Lahore. They essayed to use them against the enemy, but unfortunately they did not know how to discharge them. Instead therefore of injuring their foes, they hurt themselves, for they put the rockets in the wrong way. The Durráni army being thus self-defeated fled. This series of engagements and the flight of the army took place in Rabía ul Awwal 1161 A. H., or within 10 months of the murder of Nádir, *i. e.*, in the first year of Ahmad Sháh Durráni.

My first rupee (Plate II, fig. 1) illustrates this campaign. It was struck at Lahore in his first year سنه احد. The inscriptions on it are as follows :—

در دران احمد شاه بادشاه احد
ضرب دار السلطنه لاهور
میمنت مانوس

The reverse has on it the couplet given above and 11, portions of the date 1161. The meaning of this couplet may be thus rendered :—

Ahmad Sháh, received an order from the Unlike Powerful One
To strike coins in silver and gold from the height of the fish to the Moon.

As Ahmad Sháh the son of Muhammad Sháh was returning from the battle in which the Durráni Ahmad was defeated, he heard of the death of his father which took place on the 26th of Rabía us Sáni 1161.

I have a coin of the 2nd year of Ahmad Sháh Durráni. On the reverse it has :—

جلوس میمنت مانوس سنه ۲
ضرب پیشاور

I have seen no early Afghán coins struck at Kábul or Kandahár ; so I judge they must be very rare. The Dehlí Ahmad must have recovered Sarhind and Lahore the same year, for I have rupees struck at these two towns in his first year 1161 A. H. Sarhind in those days must have been a glorious city, if the space now covered with ruins was inhabited.

Meer Munnoo the son of Qamar-ud-Dín was made governor of Lahore. He destroyed the fort Rám Rownee which the Sikhs had made at Amritsar. The Durráni hearing of the death of Qamar-ud-Dín in battle and of the Dehlí emperor's after it again crossed the Indus. He was, however, persuaded to retire. To this second invasion I attribute the Pesháwar coin of his second year given above.

Meer Munnoo grew strong in Lahore. He became almost independent of Dehlí, and the tribute he had promised to the Durráni king in order to persuade him to retire, he never paid. This brought Ahmad Sháh again to the Panjáb. Meer Munnoo waited for him under the walls of Lahore where a battle was fought, the result of which was, that he was taken prisoner. When brought before the conqueror, he was asked, "Had you taken me prisoner, what should you have done?" "Cut off your head and sent it to my master the Emperor of Dehlí," was his answer. "Now I have you in my power, what shall I do with you?" was the next question. He replied "If you are a tyrant destroy me, if you are merciful forgive me." This so pleased the Durráni that he was reinstated as governor of Lahore. All the treasure of Lahore fell into Ahmad Sháh's hands. Lahore and Multán fell under the sway of the Afgháns. These matters occupied the 3rd, 4th and 5th years of the king's reign. The second coin drawn illustrates this conquest of Lahore. The obverse is occupied by the Persian couplet. The reverse has the following inscription :—

جلوس میمنت مانوس سنه ٥
ضرب دار السلطنه لاهور

I have two rupees of Ahmad Sháh of Dehlí struck at Lahore in *his* 4th and 5th years 1164 and 1165 A. H. So his power was not altogether gone.

The 3rd, 4th, 5th and 6th coins illustrate the hold the Durráni king kept on the annexed province of Multán and the trans-Indus provinces Of Nos. 3 and 4 I give only the reverses. They are as follows :—

No. 3. ضرب ملتان سنه ٦ جلوس میمنت مانوس

No. 4. ضرب دیره سنه ٧ جلوس میمنت مانوس

No. 5 is unique :—

Obverse در دران احمد شاه ٧

Reverse 1167 ١١ ٦٧ ضرب پیشاور

No. 6 is a beautiful coin belonging to Sir Edward Clive Bayley who kindly gave me permission to copy it :

Obverse in lozenge :— در دران احمد ١١ ٧٠

Round this is the Persian couplet, and the date ١١٧٠.

Reverse :— ضرب دار الامان ملتان جلوس ٩ میمنت مانوس

Besides the above I have a rupee of *Multán* of his 5th year and one of the 7th. Also one of *Bhakkhar* of the 7th year, which shows that these parts were under the sway of the Durráni king. There is a rupee of the 10th year struck at *Lahore*, in the British Museum.

These five years, from the 5th to the 10th of the reign of Ahmad Sháh Durráni, were full of events which happened both in Lahore and Dehlí. Meer Munnoo, governor of Lahore, died of cholera. His widow Mugalána Begum took up the reins of government and held them with a strong hand. But her son-in-law, Ghází-ud-Dín, invaded the Panjáb, and with the aid of Adína Beg ruled it, until Ahmad Sháh hearing of the disturbances in the country again visited the scene of his former conquests. In Dehlí Muhammad Sháh, the Mogul Emperor, had been dethroned, imprisoned, blinded and murdered and Álamgír the second had been placed on the throne 1167 A. H. It was in 1170 A. H. that Ahmad the Durráni returned to India, Mugalána Begum met him with an army which she united to his at Lahore. He made his son, Timúr Sháh, Nizám of Lahore and Multán, while he himself passed on through Sarhind to Dehlí. Coins Nos. 15 and 16 of my plate illustrate this fact. The obverse of these rupees has the following Persian inscription on it :—

بعالم یافت سکهه تیمور شاه نظام
بحکم خدا و رسول ایام ۱۱۷۰ 1170

The reverse of No. 15 has :—

جلوس میمنت مانوس سنه احد
ضـــرب دارالسلطنه لاهـــور

Another rupee with exactly the same inscriptions has the year ۱۱۷۱ A. H., thus showing that the 1st year of Timúr Sháh's Nizámat was in 1170-1 A. H.

The reverse of No. 16 has :—

جلوس میمنت مانوس سنه ۲
ضرب دارالامـــان ملتان

The obverse of this, No. 16, has the same inscription as No. 15 but without any year. (Just as I had finished this sentence a coin dealer brought me over 200 rupees to examine. I found one of Multán of the 1st year of Timúr Sháh's Nizámat 1170 A. H.)

When Ahmad Sháh arrived at Dehlí he began to plunder. From the son of his old enemy Qamar-ud-Dín he obtained two krore rupees' worth of ashrafis, and a krore rupees' worth of jewels. He employed Mugalána Begum on this work, and as she knew all the people of Dehlí, she caused a lot of wealth to be brought in. Besides this the Durráni married the daughter of Muhammad Sháh, and Timúr Sháh married the daughter of Álamgír II who seems to have helped in the plundering

of his own capital. Ahmad Sháh stayed in all about 40 days in Dehlí, coin No. 7 of my plates illustrates this short period.

Obv.— The Persian couplet and the year ۱۱۷۰.

Rev.— سنه ۱۱ جلوس میمنت مانوس

ضرب دارالخلافه شاه جهان آباد

I have seen rupees apparently from the same dies. As Ahmad Sháh was in Dehlí only 40 days, it is not at all wonderful that I have a rupee of Alamgír II struck in his 4th year 1170 A. H., the year of Ahmad Sháh's invasion. During this occupation of Dehlí Mathurá was plundered. Its idols and temples were overthrown and many were massacred. The historian says that not a single straw was left in Dehlí. Alamgír II was restored to the throne, but the creatures of Ahmad were left everywhere. In passing through Amritsar "hundreds of Sikhs were slain and thousands of houses destroyed." Timúr Sháh was left in Lahore with an efficient general, and Ahmad betook himself and his plunder to Kandahár.

No sooner had the Durráni sovereign left the country, than Adína Beg who had been hiding in the mountains attacked Lahore and took it. But this must have been about 1173 A. H., as the British Museum has rupees of Timúr as Nizám of Lahore for 1171 and 1173, the year of the Nizámat on this latter one being 3. Adína Beg prospered. But in Dehlí matters went from bad to worse. The Mahrattas, being called in to assist on one side of the quarrel, made themselves masters of the city. They then advanced on Sarhind which they plundered. Lahore next fell before them. After this they attacked the prince Timúr Sháh who had entrenched himself at Imánábád. He was defeated and he fled to Pesháwar pursued by the Mahrattas. The Sikhs chose this opportunity for showing their heads. Their numbers had been increasing in spite of persecution. They rebuilt Amritsar after they had forced Muhammadans to clean it. They held Lahore even for a short time at this period.

I have one rupee of Ahmad Sháh's 11th year, and one also of his 13th year struck at *Lahore*. These must have been struck when his officers were paramount in that city.

Alamgír reigned nominally in Dehlí till his 6th year. I have a rupee of his 6th year struck in Lahore in 1172. One of his 5th year, struck in Kashmír, is dated 1173 A. H. One of his 5th year and one of his 6th, both struck at Ahmadnagar—Farrukhábád, are both dated 1172. Both these were obtained from Quettah. Can it be possible they were part of the plunder taken away by Ahmad Sháh after the campaign I am about to describe?

When Ahmad Sháh saw the Panjáb lost to him, he returned, to the dismay of the Mahrattas who fled as he approached. Owing to his presence Alamgír was murdered. Alí Gaur Sháh Alam was away in Bengal. The Mahrattas retiring, Ahmad Sháh took Dehlí. This took place in 1173 A. H. Dehlí was given over to plunder for 3 days. The whole Dúáb fell into his hands. In 1174 the battle of Paniput was fought in which the Mahrattas were utterly defeated. It will thus be seen that this invasion occupied about two years, the 14th and 15th of Ahmad Sháh's reign. Coins Nos. 8—13 of my plate exemplify this period. They all have the Persian couplet on their obverses. The reverses are as follows:—

No. 8. *Reverse*:— جلوس میمنت مانوس سنه ۱۴
ضرب انوله

Aonlah is a town of Rohilkand on the railway between Barellí and Chandausí.

No. 9. *Reverse*:— جلوس میمنت مانوس سنه ۱۴
ضرب مرادا باد

This coin is the property of W. Theobald, Esq. of Bedford.

No. 10. *Reverse*:— جلوس میمنت مانوس سنه ۱۴
ضرب دارالخلافه شاه جهان آباد

No. 11. *Reverse*:— جلوس میمنت مانوس سنه ۱۴
ضرب اتک

No. 12. *Reverse*:— جلوس میمنت مانوس سنه ۱۴
ضرب بریلي

No. 13. *Reverse*:— جلوس میمنت مانوس سنه ۱۵
ضرب سهرند

Sarhind is always spelt on coins Sahrind. The obverse of this coin is dated 1174 A. H.

Besides these coins which I have drawn I have Lahore, 14th, 1173; 15th, 1175; Sháhjahánábád, 15th, 1174; Lahore, 16th, 1175; 16th, 1176; Sahrind, 16th, 1175. Mr. Theobald has one struck at Farrukhábád during this period.

Ahmad Sháh disappeared from India immediately after the battle of Paniput. He left governors in Sarhind and Lahore. The Government at Dehlí was impoverished and powerless. The Sikhs who under all the changes of government had bided their time, plundered, fled asway, grown rich and numerous, began again to assume power. They built a fort at Gujránwálla. They defeated the governor of Lahore.

J

They troubled the governor of Sarhind. They laid siege to the town of Jandiála, 11 miles from Amritsar. It was this last matter which brought Ahmad Sháh again on the scene.

They say that one night Ahmad Sháh was in a quiet sleep, all at once in the middle of the night he woke up, and ordering his body-guard of 300 horse to attend him, he took his way towards India. He ordered his Aid-de-Camps to tell the prime-minister of his departure, and to get the whole army ready and follow him with the greatest expedition. Ahmad making double marches was soon in the neighbourhood of Lahore, but with him were only 10 or 12 horsemen. Meeting with a peasant he asked him where the Sikhs were. He was told that to the number of 70,000 they were encamped before Jandiála. Hearing this he departed at once for Jandiála. The besiegers when they heard of Ahmad Sháh's arrival at once fled. The besieged could not understand it. They sent out spies to see if it were a trick of the Sikhs to draw them out of their fortifications. The spies reported that they could see nothing of the enemy. But under a tree about two kos away, they found a man sitting under a canopy. Some ten or twelve armed attendants were with him and were treating him with the profoundest respect. When the governor of Jandiála heard this, he at once knew that it was Ahmad Sháh who had come to his relief. He went out to thank his Sovereign and was received with kindness. Soon after the general arrived with the Afghan army. The general biding his time as Easterns always have done and do still, asked Ahmad Sháh why he had left Kábul so suddenly. He answered that as he was sleeping Muhammad had appeared to him, and told him of the siege of Jandiála and the distress of the besieged, and had ordered him to start at once to relieve the town. So trusting in God he had started leaving orders for the army to follow him.

After staying a few days at Jandiála, Ahmad Sháh crossed the Bías and Sutlaj, and defeated the main body of the Sikhs who were just about to commence an action with his governor of Sarhind. This action known as the Ghuloo Ghára, or great disaster, took place about 20 miles south of Ludiana. The founder of the present Pattiála family was among the prisoners. "He was declared a rája of the State and dismissed with honour."* I shall refer to this further on. Ahmad Sháh "the very ideal of the Afghán genius, fitted for conquest, yet incapable of empire" immediately returned to Kandahár. He never attempted to improve a victory or govern a country he had conquered. This incursion took place in the year 1176 A. H. The Sarhind coin I have mentioned above, seems to illustrate this period. It is of his

* Cunningham's History of the Sikhs, p. 101.

16th year. The year is 1175. But that must be a mistake. However the Lahore coins go on steadily. One of the 17th year is dated 1176, another 1177 A. H. One of the 18th year has 1177, another 1178; a 19th year one has 1178. The Dehlí and Dúáb coins cease. Ahmad Sháh no longer ruled there. 1178 A. H. is equal to 1764 A. D. which is equivalent to 1821 of the Samvat era. Now in 1822 A. S., the Sikh commonwealth struck their first rupees of Lahore. (See my Coins of the Sikhs.) Hence we shall not expect to find any rupees of the 20th year of Ahmad Sháh struck at Lahore, I have sought in vain for one of this year. After the 16th year, the Cis-Sutlaj coins cease.

After the Ghuloo Ghára Ahmad Sháh, on his return through Lahore, made Kábulí Mull his governor there. Zein Khán had been left governor of Sarhind. He was defeated by the Sikhs with immense slaughter. The town of Sarhind was utterly destroyed. The Sikhs actually carried their victorious arms into the Dúáb. It was this loss of Sarhind which brought Ahmad Sháh again to India in 1178 A. H. No very accurate account seems to exist of this incursion. It seems it was not a success. "12,000 Afgháns suddenly deserted and retraced their steps towards Kábul. The Sháh was obliged to break up his camp and follow them."* He never returned. This last incursion took place in his 18th year. The Sikhs seizing Lahore struck coins there first in 1822 A. S., as I have shown. I have seen rupees of theirs struck at Lahore in 23, 24 and 25. And yet their rule could not have been uninterrupted, for I have a rupee of Lahore of Ahmad Sháh struck in his 21st year and 1180 A. H., also one of his 22nd year is in the British Museum.

No. 14 of my plate contains the following reverse :—

ضرب دیرہ سنہ ۲۲

Dera I have seen on some coins changed to Deraját. This is of course the Trans-Indus Province. I have in my cabinet a coin of Ahmad's 25th year struck at Pesháwar. It was to this part of India his rule was restricted before he died.

The coin No. 17 is a modern Puttiála rupee presented to me by the foreign minister of the State. It has on the obverse the whole of the couplet of Ahmad Sháh who created the 1st Máhárája of Pattiála. On the reverse there is the same inscription as on No. 13. The mint is Sarhind. The katár or dagger is the sign of the present Mahárája. As a rule the rupees of this State are thick and dumpy, consequently they never have more than a third of the inscription on them. They are about the same in diameter as a four-anna piece and about 4 times

* Kángra Settlement Report by G. Barnes, Esq.

as thick. This is the only thing in India to remind us that Ahmad Sháh invaded this country no less than seven times.

Thus I have shown how coins illustrate the history of one of the conquerors of India. Never have I been able so well to illustrate the Persian line :—

هرکه شمشیر زند سکه بنامش خوانند

"People read coins in the name of every one who smites with the sword."

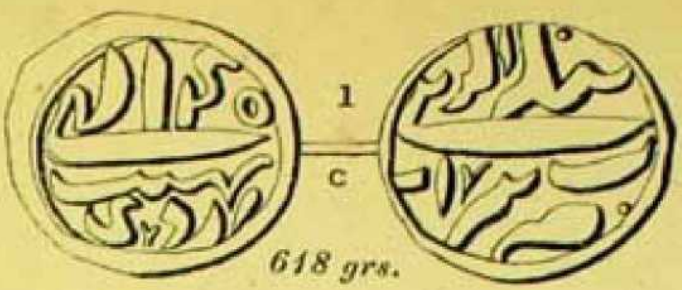
We have seen how Ahmad Sháh of Dehlí and Ahmad Sháh Durráni struck coins in the same year in the same places, as did also Alamgír II, and the Durráni. Sháh Alam II never coined in any trans-Sutlaj province. Coins were struck by Ranjit Deo in Jummoo in his name. But no rupee of Lahore or Multán with the name of Sháh Alam II has yet been found. The Sikhs became absolute masters of their own land, and all throughout the years of the long reign of Sháh Alam II, kept the mint at Amritsar, Lahore and Multán fully employed in striking coins in praise of Nának and Gobind Singh.

The numbers under the coins show the weight of each in grains.

List of Errata.

p. 22, l. 9, *read* शिर मं ऋषि

p. 28, note*, *for* on *read* in.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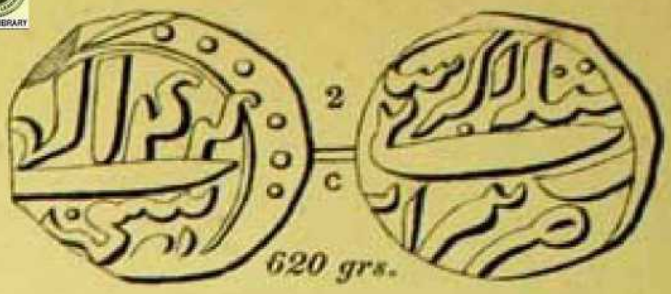
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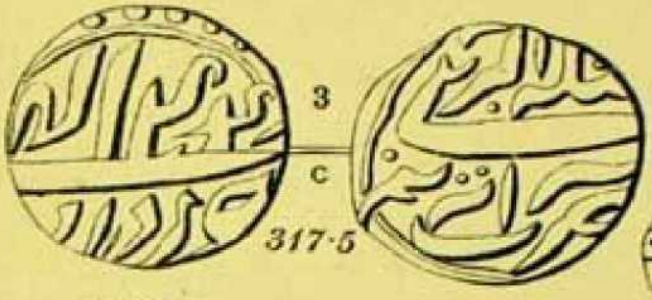
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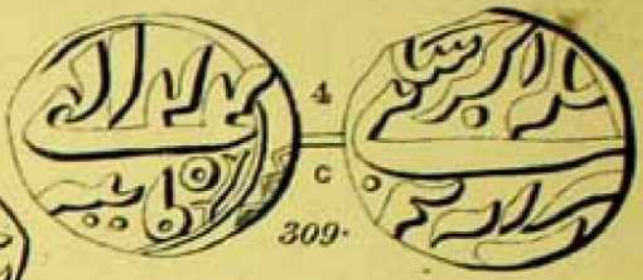
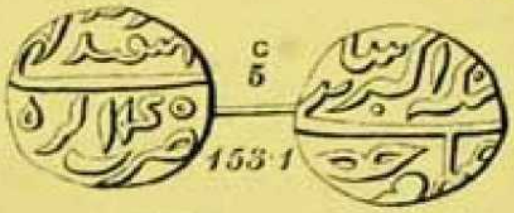

4 C 309·

C 14 58·8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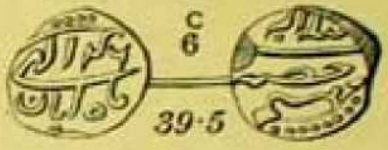
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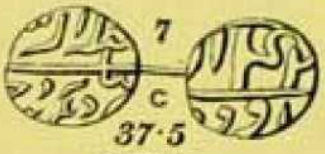
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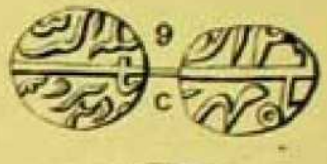
8 C 38·5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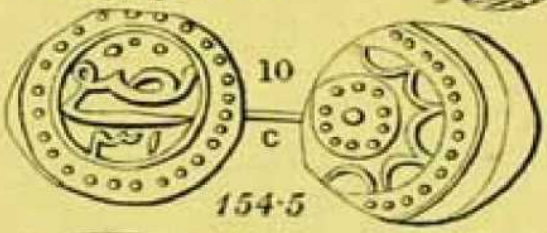
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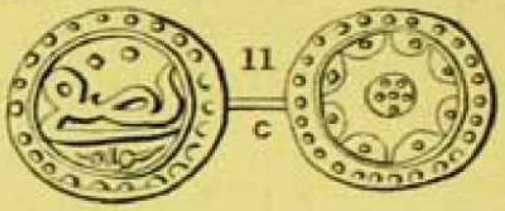
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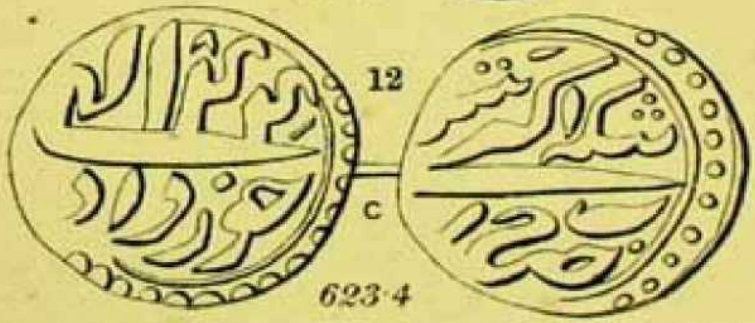
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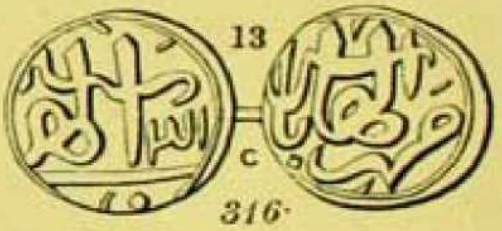
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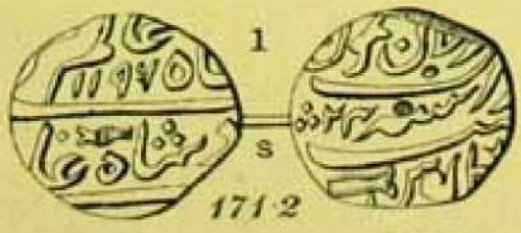
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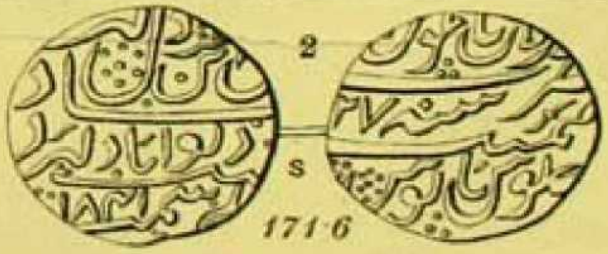
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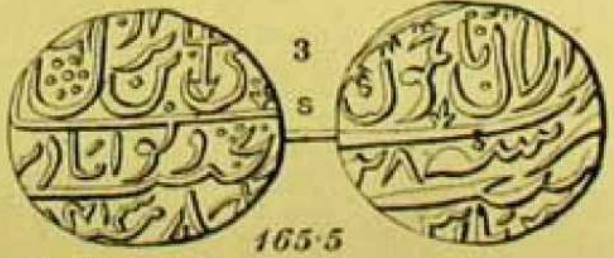
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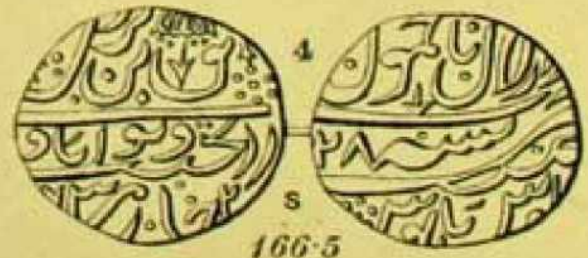
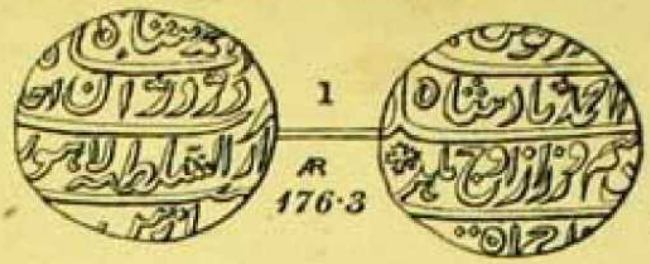

4 S 166·5

C. J. Hodgers, del.

COPPER COINS OF AKBAR (1 TO 14).

RUPEES OF RANJĪT DEO, RĀJAH OF JAMMŪ (1 TO 4).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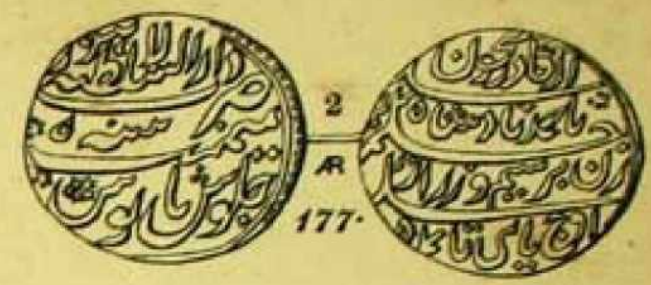
2 AR 177·

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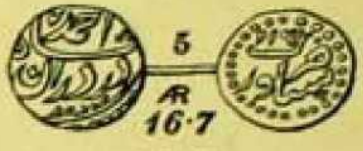
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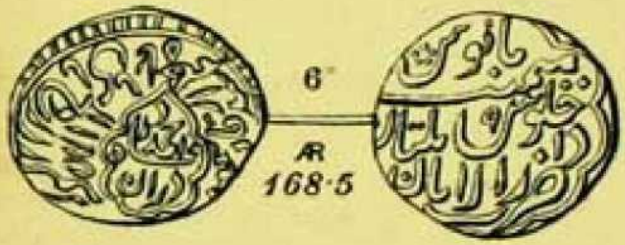
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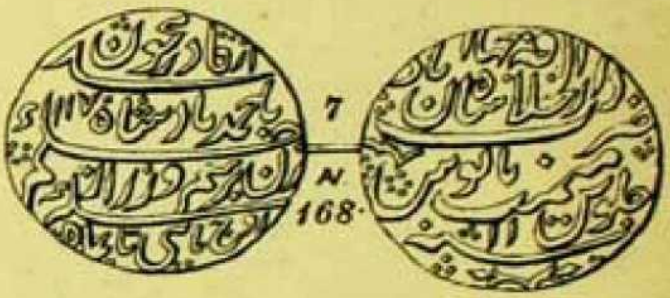
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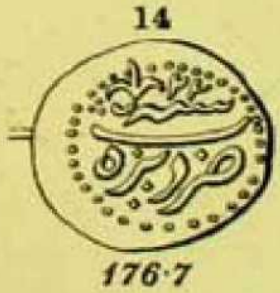
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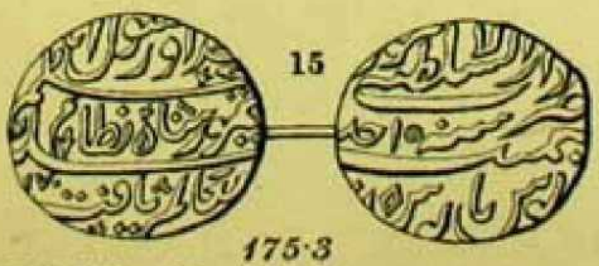
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C. J. Rodgers, del.

COINS STRUCK IN INDIA BY AHMAD SHAH DURRANĪ.

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"It will flourish, if naturalists, chemists, antiquaries, philologers, and men of science in different parts of *Asia*, will commit their observations to writing, and send them to the Asiatic Society at Calcutta. It will languish, if such communications shall be long intermitted; and it will die away, if they shall entirely cease." SIR WM. JONES.

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JOURNAL

OF THE

ASIATIC SOCIETY OF BENGAL.

Part I.—HISTORY, LITERATURE, &c.

No. II.—1885.

On the Trishṭubh Metre.—By J. BOXWELL, B. C. S.

The rich variety of rhythm that lies in eleven syllables has given form to musical poetry among many Aryan peoples through many ages. The earliest of these hendecasyllabic metres, the Vedic Triṣṭubh, on analysis yields interesting results, and discloses curious affinities to others of the group. Professor Max Müller it is true, proves almost any structure admissible in Vedic metres. But they are not to be judged like the Greek tragic senarius, which is Sanskṛit in the highest sense, carefully perfected. Any structure found in Sophocles is good, be it rare or common. Vedic metres are rough; by no means polished to perfection. But their music is clear; and analysis shows us, not exactly what is admissible and what is not, by a division line; but, by comparative frequency, what rhythm the Vedic poets sought.

Acknowledging gratefully the vṛitta of the final three syllables, I think for scansion it is better to divide the traishṭubh into an initial and final quadrisyllable, and a medial trisyllable. As we might expect, rigour of structure increases from the beginning towards the end. The form is usually given × × × × × × × — ⏑ — × : or even × × × × × × × × ⏑ — × ; but I hope to show that there is a very strong tendency in a particular direction; and that on this tendency much of the peculiar effect of the trishṭubh depends.

The final quadrisyllable is the most firmly fixed. Even in the 8th syllable there is only a trace of irregularity. The regular traishṭubh ends in a ditrochee.

Although the 7th and 5th show separately no tendency to fixity, they seem to be bound up closely by a law with the 6th, which is short in more than 90 per cent. of cases.

The rule for the middle trisyllable is this :—

⏑ ⏑ — ... 30 per cent.
— ⏑ ⏑ ... 30 per cent. } together 81 per cent.
⏑ ⏑ ⏑ ... 21 per cent.
— ⏑ — ... 10 per cent.

As there are 8 possible trisyllables ; that 3 of them should give 81 per cent., and that in 91 per cent. of cases the middle or 6th syllable should be short, proves design or rather feeling for the particular effect.

The initial quadrisyllable shows a tendency almost as strong. Of 16 possible feet,

— — ⏑ — gives 24
⏑ — ⏑ — „ 22 } 72
— — — — „ 13
⏑ — — — „ 13

that is Alcaic and quasi-Alcaic openings yield 72 per cent., while the 12 other possible openings between them give only 28. The favourite cæsura is that which corresponds to the classical penthemimeral. The typical traishṭubh is thus × — ⏑ — | — ‖ ⏑ ⏑ | — ⏑ — × ‖ or a combination of Alcaic opening with Sapphic close, a line of great sweetness and dignity.

The first stanza of the horse-sacrifice hymn, 163 of the first book of the Ṛig Veda is a very perfect example ;

Yad akrandas prathamam jáyamánas,
Udyan samudrát uta vá purishát,
Syenasya pakshá harinasya báhú
Upastutyam mahi játam te arvan.

It may be rendered into Latin in the same metre and structure ;

Quis hic jam nunc fremitum natus edit ?
Pontus-ne talem, genuit-ve nubes ?
Dat vultur alas tibi cervus armos.
Deûm gentem, Sonipes, te fatemur.

The recognized hendecasyllabic metres of trochaic ending are—

1st. English iambic trimeter catalectic.
2nd. The Italian heroic line.
3rd. The hendecasyllabic of Catullus.
4th. Certain lines of Pindar.
5th. The Sapphic line.
6th. The trishṭubh.

To these I add the Alcaic stanza for the following reason: Two lines have eleven syllables each. Two lines including the last have the characteristic trochaic ending. The first three Alcaic lines open in the same manner as about half the traishṭubhs in the Ṛig Veda; and the dactyls of the first, second and fourth lines have very much the effect of the dactyls and anapæsts which so constantly form the second or middle foot. That this division into classical feet is not unsound is shown thus. The law of syllabic length might be thus provisionally stated, 1 being practical certainty and the decimal showing the approach to certainty.

11th	syllable	common.	
10th	,,	—	1·0
9th	,,	⏑	1·0
8th	,,	—	1·0
7th	,,	×	
6th	,,	⏑	0·9
5th	,,	×	
4th	,,	—	0·8
3rd	,,	⏑	0·58
2nd	,,	—	0·8
1st	,,	×	

But it has been shown that the 5th and 7th are not separately and independently indifferent like the 1st or 3rd. If either 5th or 7th is long, the other is almost always short; and in the rare instances of 5th and 7th long together, the 6th, already very steadily short, is so persistently short that a molossus may be considered inadmissible as middle foot. It is this quality of the middle foot which seems to me to give character, second only to the trochaic close. The fact that the 6th syllable, and with it either the 5th or the 7th, will be short, produces what I can only call a ripple or break, causing flexibility and variety.

The trishṭubh metre supplies examples of almost all the other lines from the tame English iambic to the quickest Sapphic. And indeed Shakespear's iambics and Dante's heroics contain many veritable traishṭubhs. The lines may be set in a scale.

'Tis certain greatness, once fall'n out with fortune.
Tatas dadáti dáśushe vasúni.

Αἰολίδαν δε Σίσυφον κελοντο.
Púrṇagabhastim ilate supáṇim.

Vitam quæ faciunt beatiorem.
Codat rádhas upastutas cit arvák.

Per me si va nella cittá dolente.
Indram naras nemadhitá havante.

Κλεανδρῳ τις ἁλικίᾳ τε λύτρον.
Tuam ha tyat, Indara, Kutsam āvas.

Καὶ γὰρ αἰ φεύγει, ταχέως διώξει.
Gobhir açwebhir vasubhir niṛṣṭas.

Αἱ δε δῶρα μὴ δέκετ', ἀλλὰ δώσει.
Gomat açwavat rathavat viantas.

I have attempted to translate into Latin two fine odes from the 3rd and the 10th books; one into Sapphics, the other into its native metre in a Latin dress.

Ṛg Veda III. 33.

Segnius nituntur equæ volantes
Carcere effusæ rapiuntque currus;
Sic boum matres subolem tumentes
Ubere lambunt;

Ut tument pronæque Vipax Cytudris
Montium divo duce claustra rumpunt:
Deinde conjunctos sociare gaudent
Ad mare cursus.

Advenam me ripa sacræ Vipacis
Arcet invitum, geminusque gurges.
Ceu boves undæ ad mare mugientes
Ire videntur.

Flumine hoc pingui Deus ire jussit.
Quærimus matris gremium, neque ullis
Flectimur surdæ precibus. Quid audax
Vult sibi vates?

Rite libantis mea vota nymphæ
Audiant; natus Cusico precatur.
Vos brevem tardare velitis horam
Fluminа lapsus.

Quo Deus ducit sequimur. Malignum
Fulmine occisit simul Indrus anguem,
Atque iter claustris penitus refractis
Pandit aquarum.

Splendeat nomen magis illud Indri
Indies. Pestem Arcitenens peremit;
Haurit et gratos cohibente nullo
Alveus imbres.

Quod canis sis tu memor ipse fati.
Ultimum has voces iterabit ævum.
Ne velit frenare deas amœno
Carmine vates.

Post tot erratus precor o sorores,
Gurgitem currus date mitiorem
Transeat, vestris mihi neu madescat
Fluctibus axis.

Post tot erratus precibus movemur.
Transeat currus, cecidere fluctus,
Nupta succumbit nova cen marito,
Sic tibi cedam.

Trans aquas te Diva jubente et Indro
Duxerint postquam Barati cohortes ;
Œstuat flumen ; veniam ipe supplex
Numina poscam.

Occupant ripam Barati feroces,
Nactus et vates veniam dearum.
Ite nunc amnes solitosque læti
Volvite cursus.

Rg Veda X. 108.

Quid est cur has Sarama visat oras ?
Longinquum nempe est iter arduumque.
Quid opus nobis tibi ? Quo vagaris ?
Qui tu Rasam poteras transilire ?

Indri videtis famulam. Repostos
Quæro thesauros Panium latebris.
Ne jussa fallam timor urget instans,
Rasæ vada hinc poteram transilire.

Qualis et quantus, Sarama, Indrus ille,
Tibi qui longum hoc iter imperavit ?
Quin huc venit ? Hospitium paramus.
Boumque nostrorum erit ipse custos.

Nulli captandus capit alterum ille,*
Mihi qui longum hoc iter imperavit.
Non illum immane latuit profundum.
Vos fulgure Indri pereatis usti.

Quas tu boves Sarama, vis redemptas
Errant fugaces per operta cœli.
Quis impune abripiat ? inscius quis
Sperat se Panes habiturum inermes ?

* Sarama could hardly tell the Paṇis she had never seen Indra, and to say that he would conquer the conquerable is a little flat. I have taken nâham tam veda dabhiam together ; "I have not seen him in-such-case-as-to-be-out-manœuvered" and then dabhat sa "it is he who will win."

Voces valent nil Panium minaces.
An membra telo geritis scelesti
Figenda ? Patent aditus ad arcem.
Vestrum Patrem misereat Supremum.

Conditam saxo retinemus arcem
Boumque plenam Sarama, atque equorum.
Eam Panes vigilantes tuentur.
Vanum tibi hoc est iter irritumque.

Vos o superna numina invocata
Factis sacris propitia huc adeste.
Raptas boves restituant latrones.
Respuant Panes animum hunc superbum.

Faventibus Sarama freta divis
Ausa es ad nostras penetrare sedes.
Ne redeas ; te faciam sororem.
Boves optatas tibi partiemur.

Ego nec fratres neque vos sororem
Novistis, Indrus superique testes,
Qui me boves vehementer reposcunt.
Panes abeste pro cul hinc profani.

On certain symbols or devices on the gold coins of the Guptas.—*By* W. Theobald, M. N. S. L. *Bedford, November*, 1884.

The following remarks have resulted from the perusal of an interesting and instructive paper on the Gupta coinage by V. A. Smith, Esq., published in the Journal of the Asiatic Society of Bengal, Part I, for 1884.

The idea now advocated may have doubtless occurred to others who have made the Gupta and Indo-Scythian coins their study, but it does not appear to have been published, nor is it in any way alluded to by Mr. Smith in his paper on these coins.

The three symbols referred to are the 'fillet' and the 'cornu-copiæ' as they appear on the Gupta coins, as contrasted with similar symbols on Bactrian, Indo-Scythian and other coins, and the 'footstool' which occurs on both the copper and gold Gupta and Indo-Scythian coins, beneath the seated figure of 'Ardochro,' and it is for these two latter symbols or devices, that a new, and it is believed a more correct interpretation is now offered.

The Gupta 'fillet.'

The object to which the term 'fillet' has been applied and which Prinsep and Kittoe term a 'noose' is common not only on the Gupta coins, but on a variety of others, notably the Indo-Scythian of probably in part cotemporary date. Mr. Smith retains the term 'fillet' for this object "for convenience" but adds "in many cases I believe it would be more proper to follow Prinsep in calling it a '*paśu*' or noose." The question whether the term 'fillet' be used or 'noose' may not seem of much importance so long as the objects alluded to are believed to be identical, but should this be otherwise, then it it is clearly desirable not to unical one, by applying to it, a name properly applicable only to the other. It is moreover an instance of an error, simpler perhaps or minor in degree but identical in kind with another to which attention will presently be invited. It may be perhaps urged, that on coins of quasi-coarse execution like the Gupta coins, little weight can attend to the precise form of the symbol, and that the object thereon may form its general aspect be considered as copied from the more artistic 'fillet' or wreath, of Greek art, but admitting this, we are all the more thrown back, in our efforts to determine the precise significance in this particular case, of the object or symbol represented, to other data, and more general reasons than those afforded by the distinctive or artistic treatment of the symbol itself.

Not to carry the discussion further afield than India, and the country subjected to the Bactrian and Indo-Scythian kings, it may be observed that the 'fillet' or 'wreath,' (for in numismatics, the wreath is a more artistic and florid variation of the fillet, *quoad* the symbolism involved) occurs on coins in five distinct positions. 1st, In the hand of Nike or Victory, as in those of Azas and Vonones. 2nd, Encircling the king's head. 3rd, On a standard, or 'javelin' and called a staff, carried by the King or Priest, as in many Indo-Scythian coins. 4th, Either on the head or in the hand of the figure on the reverse of some Bactrian and many Indo-Scythian coins. 5th, Occupying the reverse of some Bactrian coins as in some of Antimachos.

In all of these instances it is clear that one and the same symbol is intended, representing one and the same idea, *e. g.*, paramount power, crowned by the symbol of paramount holiness. This symbol was of course the old 'fillet' or '*vitta*' of classic times the *vitta tenuis, insigne pudoris*, as Ovid calls it, the outward sign, whether borne by king, woman, or priest of power and purity.

On the reverse however, of the Indo-Scythian coins, we find such an intrusion of personages from the Hindu pantheon as renders caution necessary in accepting the same symbol, or what might be regarded as

the same symbol, as indicating the same or any approximately similar idea, and we find ourselves carried back rather to the worship of Isis, than that of Vesta. In support of this view it seems almost sufficient to adduce the fact of the appearance on these coins of Śiva, under the name of Okro, with either two or four arms and one or more* heads, and with his appropriate '*vahana*' in attendance, the bull Nandi.

Now the 'noose' in the hand of Śiva, can hardly with reference to that deity's functions and character be regarded as having any symbolical connexion or reference to the 'fillet' on Greek or Roman coins, but rather as representing a phallic symbol, appropriate enough in the hand of the Indian Śiva or his consort or 'Śakti,' the tender Párvatí, or the formidable Durgá. But admitting that the symbol of the 'noose' is no longer the same as the 'fillet' when met with on the Gupta or some Indo-Scythian coins, it must not be inferred that it is exclusively a symbol of Śiva, as it is also borne on some Gupta coins by a goddess, who is probably, as Mr. Smith maintains intended for Lakshmí, the consort of Vishṇu, as indicated by the lotus throne whereon she is seated. Whilst therefore in the hand of the goddess seated on a lion, the symbol represents the 'noose' or '*paśu*' of Śiva, in the hand of his 'śakti' Párvatí or Durgá, yet when it is borne by the goddess throned on a lotus, it probably represents a female anthem homologous with the *sistrum* of Isis, and typical of the fruitfulness whereof Lakshmí is the dispenser and fountain head. Indeed it is curious, should the view presently to be developed with regard to the 'cornu-copiæ' be accepted, that both symbols carried by the goddess, variously seated on a lion, throne, or lotus on the reverse of the Gupta coins, should be equally appropriate, whether such goddess is supposed to represent Párvatí or Lakshmí.

* It is usual to speak of the polycephalic Śiva, as three-headed or three-faced, but this view is hardly supported by the coins, or any necessity of Hindú mythology. On the coins, this form of Śiva or 'Okro' is represented not as though it were the artist's intention to represent three, but rather four heads or faces. What is depicted is, a full face in front flanked by two faces in profile, and with obviously room behind for a fourth face such an ideal figure corresponding very exactly with the well-known four-headed 'linga.' See for example fig. 26 in the Plate of Indo-Scythian coins in 'Jainism' (E. Thomas) which type is also occasionally met with on the copper coins of Ooerki with the king on the obverse seated on a couch, with one leg uplifted thereon. Now Śiva though a polycephalic deity, is not one whose mythological attributes, like Diana's "Tria virginis ora Dianæ" necessitate a triform conception of his person, and therefore the image on the coins of Ooerki and Bazdeo may fairly be regarded as representing not three but four heads. Had the artist wished to represent the god in a triform shape, he would have produced a figure resembling that of Janus, with two faces, neither of them in full profile, but this he has never attempted.

The above considerations therefore lead to two inferences: 1st, that the 'noose' symbol on the gold Gupta coins, represents wholly different ideas from those symbolised by the 'fillet.' 2nd, that the 'noose' symbol on these coins, is of ambiguous import, and that it represents indifferently the 'noose' of Siva when borne by a goddess, whom we have other reasons for regarding as his Sakti, whether under the form of Párvatí or Durgá; or when it is borne by a goddess presumably identified with Lakshmí, it is then no longer the '*paśu*' of Siva but a feminine symbol, analogous to the '*sistrum*' of Isis, and that it is by collateral indications only that it can be decided in which sense, in each case this symbol is to be construed. See Inman's Ancient Faiths embodied in Ancient Names, Vol. I, p. 527.

Having thus considered the probability of two symbols of entirely different significance being united or confounded under the term 'fillet' it remains to see if another and more interesting example of this union, and the resulting observation or blending of the ideas, is not afforded by the 'cornucopia' as it is termed, on the Gupta coins, and if an exotic symbol is not in this case also made to do duty for a different and peculiarly native idea.

The Gupta 'cornu-copiæ.'

It may be granted at once that the 'cornu-copiæ' on the Indo-Scythian coins is exotic in its design, and copied probably from Roman coins of the period. The idea too is doubtless the same, and, as on Roman, so on Indo-Scythian coins the 'cornu-copia' is the symbol of good fortune, prosperity and abundance. This classic type of this particular symbol is seen on coins figured in Ariana Antiqua, Pl. XX, figs. 4 and 5, and also on the plate of coins in Jainism (Edward Thomas) fig. 16. In one gold coin of Ooerki, in my possession, the classic idea of the 'cornu-copiæ' brimming over with the kindly fruits of the earth is well displayed, and on either side project, what are clearly intended to represent corn-ears. Generally, however, the treatment is more conventional, though in every instance it would seem as if fruits or corn were the objects intended to be understood as filling the 'horn.' So far as I know, the 'cornu-copiæ' is always borne, on these gold coins by the goddess Ardochro, standing. In the Peshâwar find there were several of such coins and one with the legend of Mioro (No. 49 of Catalogue) but whether with the usual standing figure of a goddess is not quite certain, though such is probable from the wording of the catalogue. In copper coins, however, of Ooerki, of the elephant and rider type, the 'cornu-copiæ' though usually carried by the goddess Ardochro, is also occasionally seen in the hand of Mao. Now the name Mao on these coins, is

generally applied to a male deity, whom the crescent moon behind his shoulders proves to be the masculine moon, the Deus Luna, or 'Soma' of the Hindús. But on those coins whereon the 'cornu-copiæ' is borne by Mao, the deity is feminine and without the crescent moon behind her shoulder, or in other words the title Mao is occasionally bestowed on the deity usually named Ardochro.*

In every single instance that has come under my observation, the 'cornu-copiæ' on the Indo-Scythian coins in gold or copper of Ooerki, Kanerki, or Bazdeo, though various in design, never present the peculiar type which it assumes on the Gupta coins, neither is the peculiar type of the Gupta cornu-copiæ ever represented that I am aware of on either the gold or copper coins of the ordinary Indo-Scythian mintage, though seen in some coins of a different type classed by Wilson with the Guptas: A. A. Pl. XVIII, fig. 25 and by Mr. Smith as Indo-Scythian, one being figured on his Plate IV, fig. 6. Prof. Wilson (A. A. p. 427) describes these as "rude coins" and so perhaps many of them are; but two in my possession attributable to 'Bri Shaka' and 'Sita,' are as well designed and as clearly cut and stamped as the bulk of the Gupta coins, though displaying a stiff and formal mannerism quite distinct from either the Gupta coins on the one hand, or the Indo-Scythian on the other.

On the copper coins the 'cornu-copiæ' is either entire, or bifid at the top. In all the specimens I have seen of the 'cornu-copiæ' borne by Mao, it is distinctly, and sometimes deeply bifid, whilst the same symbol on the copper coins whereon Ardochro is figured, is entire at the top. This, however, is not a distinctive character, as on the gold coins Ardochro is represented bearing both types of the symbol. In A. A. Pl. XII, fig. 5 and Pl. XIV, figs. 4 and 5, the undivided type of cornu-copiæ is figured and this is certainly the commonest form, but a gold coin of Ooerki figured by Thomas (Jainism, Pl. 11, fig. 16) the cornu-copiæ is distinctly bifid, though not to the same extent as is seen on the copper coins with more on the reverse, and I have a very similar gold coin with the 'cornu-copiæ' distinctly though not deeply bifid. It is not from the same die as that figured by Thomas, as the 'nimbus' is complete, whereas on the figured coin it is only represented on front of the king's face.

The 'cornu-copiæ' (as it is called) on the Gupta coinage differs considerably from either type of the symbol on the Indo-Scythian coins, and this difference is too constant and circumstantial to be the result

* On another of these copper coins of Ooerki, Mao is also represented as a male figure with nimbus, and no crescent behind the shoulders, but with the emblem of Vulcan; in his right hand a hammer, with a small handle (like the bamboo handle of an Indian smith's hammer) and in his left, resting against his shoulder, a pair of pincers precisely like those now used in an Indian bazaar by an iron-smith.

merely of accident or inferior execution. On this point Mr. Smith pertinently remarks: "The suggestion that the figure of the Ardokro goddess was adopted by Samudra in mere imitation of a foreign design does not appear tenable. The coins with this reverse undoubtedly show evident traces of foreign influence, but they are far from being mechanical copies of alien design."

If this view is correct, as is probably the case the question arises, whether this constant difference in type of the 'cornu-copiæ' symbol which is found to exist on the Indo-Scythian and Gupta coins respectively, does not mark a corresponding divergence of ideas, represented respectively by each type of the 'cornu-copiæ' symbol? That such is the case with the 'fillet' there are, as has been shown good grounds for supposing, and in like manner a close examination of the Gupta 'cornu-copiæ' suggests that the idea it represents is entirely different from that of plenty and abundance, and that it stands really for, and in an adoptive and conventional mode of representing the native object of symbolical worship, the snake or Nága.

The point wherein the 'cornu-copiæ' symbol on the Gupta coins, diverges from its classic prototype on the Indo-Scythian coins is this, that whereas the latter has always the appearance of a receptacle stored with the kindly fruits of the earth, among which, in the best executed examples, heads of grain may distinctly be recognised, the Gupta symbol is closed above by a more or less convex line ornamented by a variable number of approximately equal and equidistant pellets or dots. Now bearing in mind that the symbol may be intended for the divine Nága, it is by no means an undue stretch of the imagination to regard these pellets as a conventional mode of representing a polycephalic Nága, whether we regard each pellet as corresponding to one of the heads or a mere jewel or ornament indicative of as many heads as pellets. Of the coins figured by Mr. Smith on Pl. II, fig. 3 displays 5 pellets, figs. 3, 7, 8, show 7 pellets and figs. 1 and 11, 8 pellets and similarly in the figures given in A. A. Pl. XVIII, the number of pellets ranges from 5 to 8.

It yet remains to connect this Gupta 'cornu-copiæ' with the Nága and though Mr. Smith does not allude to any such idea yet both his own Plates and Plate XVIII of the Ariana Antiqua furnish on close examination sufficient evidence to establish this rather startling conclusion. In A. A. Pl. XVIII, fig. 6 the curved body of a snake is indicated on the right hand side of the figure, the entire animal being above the couch or throne whereon the goddess is seated. In fig. 8 of the same Plate, the body of the snake seems to pass behind the back of the goddess and come out in front of the right instep whence it curves up over the left knee, the tail resting on the throne. In fig. 9 a somewhat similar arrangement

is seen though not quite so clearly made out. Turning now to Mr. Smith's paper, the first coin suggestive of a serpentine termination of the 'cornu-copiæ' symbol is fig. 3 of Pl. II. The snake's body in this coin comes round to the front, crosses the lap of the goddess and depends on one side from the left knee. This is not clearly to be seen on the plate, but is very distinct on a fine coin of the same type in my possession. In fig. 6, Pl. III, the goddess is represented sitting on a lion, and is described in the text (Page 186) as holding a flower in the left hand. Now this object is very unlike the flowers seen on other Gupta coins, as for instance in figs. 7 and 8 of the same Plate and in figs. 1 and 10 of Pl. II, and is with greater probability intended for a snake with distended hood, displayed on a level with the head of the goddess, a distinct fold of the snake's body being very distinctly seen in contact with the left knee. In some figure a sort of loop in this position may be held to represent the loose sleeve of the goddess, but in the present instance, it cannot possibly be thus explained, nor does there seem to be any alternative explanation to that now proposed.

Another indication of the true nature of the 'cornu-copiæ' symbol borne by the Ardochro goddess on the Gupta coins is in the object seen at her feet. Of this Prof. Wilson thus speaks (A. A. Page 423). "Instead of the lotus also, and the Indian mode of being seated, the female is often represented as sitting on a high-backed chair, with her feet on a footstool." Now this 'Ardochro footstool,' so called, can only be so regarded, not because it bears any distinct impress of anything of the sort, but because it was plainly intended by the artist to represent something; and being at the feet of the goddess, a stool seemed a probable conjecture. But the stool so called, is simply the portion of a circle, and the execution of the coins is such as to render the idea wholly untenable that the artist lacked the ability of giving some closer resemblance to a 'stool,' to the object in question, had such been his design. The addition of only a few rough lines and cuts on the 'die' would have left no doubt, that a 'stool' was what the feet of the figure were reposing on; as it is, the feet are simply encircled with a line, the area enclosed by which being ornamented with pellets or dots. The coins figured in A. A. Pl. XIV, figs. 19, 20, 21, and 22 support this contention, that it is not from want of artistic capacity that the so-called 'stool' is so very imperfect a representation of the object specified.

If on the other hand the 'cornu-copiæ' symbol is regarded as a conventional or covert representation of the 'Nága' or snake, then the 'stool' so called, at the feet of the goddess, at once resolves itself into the terminal coil of the monster's body, vindicating the powers of the artist from the reproach of inadequately representing what it was his intention to convey.

Supposing this interpretation of the 'footstool' so called is accepted, then the dotted area whereon the feet of the goddess rest; will represent the solid earth bounded or encircled by a fold of the mystic snake or Nága, whose presence is equally appropriate and in union with Hindú feeling, whether the symbol be regarded as introduced in honour of Śiva or Vishṇu, or to please the votaries of both.

There is an objection which might be raised, with reference to Pl. II, fig. 3 to the identification of the 'footstool' so called with the terminal portion of the snake's body, of which the cornu-copiæ represents the expanded hood, and that is that on the coin alluded to, the extremity of the tail of the snake is seen recurved over the left knee of the goddess, though the 'footstool' is also seen at her feet.

As previously remarked, however, a coin in my possession whilst displaying very clearly the tail of the snake as indicated in the Plate, offers a somewhat different treatment to that usually seen on both gold and copper coins, of the so-called 'footstool,' and this slight alteration in design, is no doubt caused by the very fact in question of the tail of the snake represented by the cornu-copiæ, being in this instance visible to its termination. Usually the tail is so arranged as to allow of the 'footstool' being considered as a terminal fold of the snake's body; in the case under consideration that is not so, and a slight but important modification is introduced which though present in the figured coin is still more clearly displayed on the finer coin in my possession. Usually the Ardochro footstool is represented by an oval line, bounded in part by the drapery of the figure, and which would very well represent a footstool if only some indication of legs were added. In my more perfect coin, the oval is incomplete, a clear space intervening between the ends and the drapery; in other words, it is no footstool which lies at the feet of the goddess but a curved snake. The coin is too well executed and in such preservation, that there is no room to doubt that such was the intention of the artist, and nothing but a foregone conclusion could allow of any doubt but that the cornu-copiæ on this coin represents one snake and the 'footstool' another.

On some less artistic examples, the line representing this snake is double, and it is not clear whether we are to regard this duplication, as representing a second snake, or as merely the result of inferior execution, my own impression strongly inclining to the latter conclusion.

A coin in my possession, procured in the Panjab, with the name 'Sita' on it, and of precisely the same class of coins as that figured by Mr. Smith, Pl. IV, fig. 6, proves that a similar interpretation of the 'cornu-copiæ' symbol can be applied in their case also. This is not clearly seen on the figured coin, as what is really the snake's body, there

appears as what might be the sleeve from which the arm of the goddess protrudes, but on my more perfect coin, the sleeve or cuff appears as a fold above the loop which would seem to be intended as a fold of the snake's body, round the arm of the goddess, with the extremity of the tail just visible on her left knee.

In support of the views here put forth reference has only been made to coins in my own cabinet or those figured in the 'Ariana Antiqua,' Mr. Thomas's 'Jainism or the early faith of Aśoka,' and Mr. Smith's paper, all works readily accessible to the Indian reader, but an examination of the fine series of Gupta coins in the British Museum, strongly bears out the fact of the Gupta 'cornu-copiæ' being (by its mode of representation on the best samples) a conventional symbol of the 'Nága' and the only point I cannot explain satisfactorily to myself, is how this very obvious interpretation has hitherto escaped the notice of the many far abler antiquaries than myself who have studied these coins; for once enuntiated, the idea seems almost as obvious, as the celebrated problem of the egg propounded by Columbus.

The Square Silver Coins of the Sultáns of Kashmir.—*By* Chas. J. Rodgers, M. R. A. S., *Member of the Numismatic Society, London, and Associate Member of the Asiatic Society of Bengal.* (With 3 Plates.)

When I wrote my small paper on "The Copper Coins of the Sultans of Kashmir" I mentioned the fact of my possessing square silver coins of five Sultáns. The publication of my papers on the coins of Kashmír caused other numismatists to search and the result was a great find of coins of both the Sultáns and Máhárájahs. I too was aroused from my lethargy and led to see if I could not get a few more coins, and I dared to hope that as I had published the copper coins of ten Sultáns, I might perhaps secure the silver coins of the same number of kings. I tried all the bazaars of the Panjáb, but they gave me nothing. A friend of mine travelling from the Jhelum to Kángra along the outskirts of Jammú tried every village bazaar, and he was successful in getting several coins amongst which was one of Mahmúd Sháh a name hitherto unknown in the annals of Kashmír, and of whom I have not as yet seen a copper coin. But more than this he obtained the *silver* coins of no less than five of the old Máhárájahs in fine condition. These are round and are similar to the copper coins only of much finer workmanship. This success led me to try for myself in Jammú and its environs.

I accordingly secured the services of an intelligent native who could read Persian well and draw a little, and who was moreover honest and so active as to seem almost ubiquitous. He made two or three journeys on my behalf and the result was that on starting from Amritsar on a year's furlough I had the pleasure of taking with me coins with the names on them of no less than seventeen Sultáns. One of them, however, had come to me in exchange from my revered friend General Cunningham,—that of Fath Sháh. During my absence Dr. Stulpnagel employed the same young man with equally good results for he obtained an additional coin, that of Yaqúb Sháh's. I afterwards secured a second one for General Cunningham. The accompanying three plates represent the coins thus obtained.

I do not think I can do better than transcribe the inscriptions so far as I can decipher them. Perhaps more successful numismatists or happier possessors of better specimens will be able to put me right on several points. I need not say how happy I shall be to be corrected as what I am in search of is historical correctness. We must not be shocked at the revelations of the coins. Here they are, the metal records, struck, as we have every right to believe, by the Sultáns themselves during the time of their reign. We must take them exactly as they are—

No.	Obverse.	Reverse in scalloped lozenge.	Margin.
1	السلطان الاعظم سكندر شاه	ضرب كشمير	في شهور سنه اثني لعه
2	السلطان الاعظم زين العابدين ٨٣٢	do.	في شهور سنه اثنين واربعين وثمانماية
3	السلطان الاعظم حسن شاه ٨٧٦	do.	do. do. do.
4	do. do. do.	do.	Variant of No. 3.
5	السلطان الاعظم محمد شاه	do.	Illegible.
6	do. do. do.	do.	في شهور سنه احدي ? ?
7	السلطان لاعظم فتح شاه	do.	في شهور سنه اثنين واربعين وثمانماية
8	السلطان الاعظم نادر شاه	do.	Smudged copy of above.
9	do. do. do.	do.	Muddled copy of margin of No. 7.
10	do. do. do.	do.	في شهور سنه سبع وخمسين وتسعماية

No.	Obverse.	Reverse in scalloped lozenge.	Margin.
11	السلطان الاعظم شمس الدين	ضرب كشمير	The reverses of these two coins are so bad I have not drawn them.
12	do. do. do.		
13	السلطان الاعظم محمد همايون غازي	ضرب كشمير	في شهور سنه ثلث وخمسين و تسع مايه
14	do. do. do.	do.	do. do. do.
15	السلطان الاعظم اسلام شاه ٩٧	do.	في شهور سنه سبع وخمسين و تسع مايه
16	السلطان الاعظم ابراهيم شاه	do.	Illegible.
17	السلطان الاعظم اسماعيل شاه	do.	Copy of margin of Nos. 2 or 7.
18	السلطان الاعظم محمود شاه ٩٦١	do.	في سنه تسعمايه و ستين و احدي
19	نصير الدين محمد غازي شاه (؟) ٩٦	do.	Illegible.
20	نصير الدين محمد حسين بادشاه غازي	ضرب كشمير	في شهور سنه سبعين و تسعمايه
21	do. do. do.	do.	do. do. do.
22	do. do. do.	do.	٩٧٢ في شهور سنه اثنين و سبعين و تسعمايه
23	ظهير الدين محمد علي بادشاه ٩٨٩ (؟)	ضرب كشمير	٩٨٩ (؟) بتاريخ سنه نهصد و هشتاد (و نه)
24	do. do. do.	do.	٩٨٠ بتاريخ سنه نهصد و هشتاد
25	do. do. do.	do.	٩٨٧ في سنه نهصد وهشتاد و هفت
26	نصير الدين محمد يوسف بادساه غازي	do.	do. do. do.
27	جلال الدين محمد اكبر بادشاه غازي	do.	do. do. do.
28	اعظم محمد جلال الدين اكبر	do.	في سنه تسعمايه و ستين واحدي

No.	Obverse.	Reverse in scalloped lozenge.	Margin.
29	اعظم محمد جلال الدين اكبر بادشاه	ضرب كشمير	Unintelligible and not given.
30	السلطان الاعظم جلال الدين محمد اكبر	do.	Not given but date same as on 28.
31	السلطان الاعظم حيدر شاه ٨٧٣	do.	في شهور
32	السلطان الاعظم محمد شاه ٨٤٢	do.	في شهور سنه اثني و اربعين و ثمانمايه
33	السلطان الاعظم ح محمد همايوں غازي	ضرب كشمير	في شهور سنه خمسين
34	نصير الدين محمد يوسف بادشاه غازي	do.	٩٨٧ بتاريخ هفت هشتاد و نه صد
35	نصير الدين محمد يعقوب بادشاه غازي	do.	٩٩٢ بتاريخ دونو دو نه صد
36	السلطان الاعظم بد تا علي ٩١٣ (?)	do.	في شهور سنه اثني اربعين و ثمانمايه
37	same as 35.	same as 35.	Same as 35.
38	ع الدين محمد غازي	do.	٩٨٧ بتاريخ هفت هشتاد و نه صد
39	السلطان الاعظم محمد اكبر		بتاريخ نه صد نود ٦ (?)
40	ضرب سري نگر		٤٧ الهي اسفندار مز
41	ضرب سري نگر ٤٧ الهي خورداد		اكبر الله جل جلاله
42	ضرب سري نگر ٥٠ الهي اردي بهشت		do. do.

Coins Nos. 39 and 40 are copper. They are given to illustrate remarks made in the course of this essay on the *silver* coins of the Sultáns. They are both of them new to numismatists not having yet been published. No. 40 is exceedingly rare. I have only seen one other like it.

There are several points calling for notice in the above list of coins (1) On some coins the dates are given in two ways in figures and in words. Some have only the words. (2) In some cases the date is in Arabic words in others in Persian. (3) The same date,—*viz.*, 842 appears in Arabic words on the margins of coins which either possess

another date in figures or are the coins of kings who reigned long after 842. One coin of Muhammad Sháh No. 32, Pl. III has the date 842 in figures as well as words. (4) The date on coin No. I, Pl. I, is certainly like the date on the coins of Zain ul Ábidín. And yet No. I is a coin of Sikandar the father of this king. It is just possible that Zain ul Ábidín struck the coin in honour of his father. All the silver coins I have yet seen of Zain ul Ábidín have one date 842 in both figures and words, the figures appearing on the obverse and the words in the corners of the reverse. Hasan Sháh's coins have on them 876 in figures on the obverse and yet 842 in Arabic words on the reverse. Fath Sháh and Nádir Sháh in his earlier years used the same date 842 as far as I can judge. (5) The reverse of a coin of Akbar, No. 28, Pl. II seems to have been struck with the very die that was used for Mahmúd's coin No. 18, Pl. II, the year having the same 961 two years before Akbar came to the throne. All this is very strange. It reduces the value of the coins as aids in historical research to a minimum. What we want in the history of Kashmír is an accurate and trustworthy chronology and yet the coins which we usually regard as worthy of trust prove in this case to be worthless or nearly so. All the manuscript histories I have as yet consulted give different dates. They all vary from Prinsep. And Prinsep and all the MSS. differ from the coins. The later coins, however, seem trustworthy. I think we may accept the date in figures on Hasan Sháh's coin, 876. The date on both the silver and copper coins of Haidar Sháh is in figures 874. This date was evidently a favourite one for I have a small copper coin of Muhammad Sháh and also of Fath Sháh with this date on in *figures*. There are parallel cases to this. In my paper on the Sikh coins I showed that Ranjít Singh adhered to the year 1884 A. S. for ten years and to 1885 A. S. the Sikhs adhered until they ceased coining. But in small figures on the other side the real year was inserted. Again the H. E. I. Company struck coins at Farrukhábád on which the year is invariable 45th of Sháh Álam: at Murshedábád 19th year. Surat and Calcutta mints each had an invariable year. Fortunately we have no need of numismatic aid for the period of the Company's rule.

It will be seen that no coins of the early Sultáns have as yet been found. If my reading of the date of coin No. 1, pl. I, bearing Sikandar's name be correct then the first silver coins are those of Zain ul Ábidín. We have, however, Sikandar's coins in copper. In my own small cabinet I have five undoubtedly his and several doubtful ones. Every cabinet of coins in the Panjáb contains a lot of coins of Kashmír in copper which no one has yet been able to assign to any known ruler.

It is very peculiar that no coins bearing the name of Habíb Sháh

have yet been found. It is probable, however, that although Habíb's name occurs in inscriptions the name of the coins was Mahmúd.

Again we have on the coins the name of *Nádir* Sháh. Now, no list of kings gives this name. They all have *Názuk Sháh*. This must have arisen from some mistake of the early copyists unless indeed his name was Nádir Sháh on his coins and Názuk Sháh in the mouths of the people. In one MS. in the British Museum the name Názuk Sháh is spelt variously مار شاه بار شاه تار شاه and نار شاه. All the MSS. read Názuk and all the coins both in silver and copper read Nádir. No coin has yet been found with Názuk on it.

There were two kings of the name of Shams ud Dín. I think the coins are those of the second and not of the first king of that name. Unfortunately neither of the coins I figure has a margin worth drawing. It is perfectly illegible. Hence no date can be made out.

Of Islám Sháh and Humáyún I shall speak in another place.

It seems to me that these coins evidence that Arabic was not much studied in Kashmír, or if studied, the knowledge of it was confined to the Muhammadan saints and sages with accounts of whose accomplishments and virtues Muhammad Azim's book abounds. The knowledge did not get into the mint. The reign of Zain ul Abidín was, however, favourable to learning. In the confusion which followed learning was but lightly esteemed.

The coins vary very little. There is a certain monotony about them. They are all square. They have the same kind of lozenge on the reverse. The differences in the inscriptions will be at once visible. There are two the names on which I cannot make out. Nos. 36 and 38. Pl. III. Perhaps some one has better specimens. No. 30 is the property of my learned friend Dr. Stulpnagel as is also No. 35. I have much pleasure in acknowledging the kindness which placed the coins at my service. The same pleasant duty I have to perform to General Cunningham for the use of No. 37. All the rest of the coins are or were in my cabinet. Many have found rest in the British Museum.

When Akbar had got a fair hold on the country then he struck rupees in Kashmír with his own peculiar inscription on them. Nos. 41 and 42, Pl. III are two rupees of this kind struck in Srínagar. No. 40 is a copper dám struck in the same city. No. 39 is a copper coin of Akbar following the style of the old Sultáns.

The weight of the square silver coins varies from 91 to 96 grains. The lightest is one of Shams ud Dín's the heaviest one of Yúsuf Sháh's. Zain ul Abidín's coins vary as much as 3 grains. Some are worn more than others. If the coins of Shams ud Dín are of the 1st king then we

can understand their being so much worn. But we cannot understand why his immediate successors' coins have not been found yet.

The five silver coins of the Maharajah's which I have vary from 82 to 87·9 grains. This weight is about 10 grains less than the average weight of the Muhammadan coins. Hence we cannot say that these square coins are the successor of the Hindu coins which were called *padákas*. The difference between the copper coins of the Máhárájahs and their silver coins is this; on the reverse instead of the word *deva*, the name of the coin पदक is given. The word used in Farishta when speaking of these coins is *Sikka* سکہ.*

Perhaps it will make matters easier if now without further preamble we give a slight sketch of the History of Kashmír under its own Sultáns, and thus show who the people were whose coins we have here drawn. Throughout I shall be guided by Farishta whose authority seems trustworthy and who seems to have consulted trustworthy authorities.

Sháh Mír.—In the reign of Sinha Deva in the year 715 A. H. = 1315 A. D., one year after the battle of Bannockburn, a faqir by name Sháh Mírzá or Sháh Mír appeared in Kashmír. He gave himself out to be a descendant of Arjun one of the Pándús. So he was of Hindu descent though of the Muhammadan religion. He became a servant of Sinha Deva who, however, died shortly afterwards. Sinha Deva was succeeded by Rinchina Deva who made Sháh Mírzá his wazír and the tutor of his son Chandar. Rinchina Deva died in 1318 A. D. and he was succeeded by a relative of his named Udyána Deva who came from Kandahár. This Mahárájah made Sháh Mírzá his wakíl and his two sons Jamshed and Alí Sher received appointments. Sháh Mírzá had two other sons Sarashának and Hindál. These also obtained power and office. Too late Udyána Deva found out his mistake. The father and four sons grew daily in wealth and power. The Mahárájah was a mere cypher in the land. At last in 747 A. D. he died. His widow Kotáh Rání desired Sháh Mírzá to put Chandar his pupil and the son of Rinchina Deva on the throne, and himself to hold the reins of government as before. He did not obey. She raised an army and went against him and was defeated and taken prisoner. She at length consented to marry Sháh Mírzá and to become a Muhammadan. One day and one night she spent as his wife. The next day she was seized and sent to prison. And then Sháh Mírzá, *causing coins to be struck*, and the khutba to be read, *in his own name* ascended the throne with the

* General Cunningham says in a letter received from him, 11th May 1884, "I have ascertained by actual assay that the so-called silver Hindu coins of Kashmír do not contain even the faintest trace of silver. They are simple white brass, made of zinc and copper."

title of Shams ud Dín. (There is just a possibility that coins Nos. 11 and 12 are of this Sultán. The points in favour of this view are (1) the archaic forms of the letters, (2) light weight evidently caused by wear, and (3) the fact that Shams ud Dín I was a ruler of some importance, whereas Shams ud Dín II was a puppet king.)

He reigned in all three years and died in his eightieth year. His reign would seem to have been a beneficial one. He raised two families to eminence the Chakks and the Mákarís. From these two families the chief generals and leaders and soldiers were drawn. He left the throne to his two sons Jamshed and Alí Sher. This was about 750 A. H. as Shams ud Dín obtained the throne about 747 A. H. and reigned three years.

(The above is one account. A manuscript history says that Zuljú in 724 A. H. came to Kashmír with an army of Turks and Moguls when Rinchina was king. This Zuljú is represented as marrying Rinchina's widow. The MS. goes on to say that Shamsher got the throne in 742 A. H. and Ala-ud-Dín in 748, A. H. We must not expect exactness in either names or dates from native historians. Indeed all throughout we may lay this down as an axiom that ignorant copyists can never be trusted to make accurate copies of books they do not understand. Another MS. which I consulted on a former occasion has it that Ratangirí was the first Sultán of Kashmír and that he was a second Solomon. Zuljú is said to have come from Kandahár and to have returned there.)

Alá-ud-Dín.—After the death of Shams-ud-Dín, the brothers fought for the throne for about fourteen months. Eventually Sháh Jamshed was defeated and Alí Sher came to the throne under the title of *Alá-ud-Dín* and he made his younger brother Sheráshának his waqíl. In the early years of his reign there was plenty in the land, but the latter part of it was troubled with famine. One good law he made :— that no bad woman should have any inheritance from her husband. This law acted well. It restrained the women. This lets in a little light on the social condition of that time and land. Alá-ud-Dín reigned twelve years eight months and thirteen days.

Shaháb-ud-Dín.—His younger brother ascended the throne under the name of Shaháb-ud-Dín. He was a great conqueror. The day that passed without the receipt of a report of some victory or other obtained by his troops he did not count as a day of his life. Kandahár and Gazní feared him. He himself went to Pesháwar and threaded the passes of the Hindú Kush. He planted his tents on the banks of the Satlaj and in the way the Rájah of Nagarkot (Kángrah) gave in his submission. This rájah was just returning from a plundering expedition in the

direction of Dehli and part of the plunder was given as a present to Shaháb-ud-Dín. Little Tibet also sent a message desiring peace.

On his return to his capital he made his younger brother Hindál his heir to the exclusion of his sons Hasan Khán and Alí Khán whom he sent away in the direction of Dehlí. He reigned, in all, 20 years. In his reign Musalmans were few in the land, but as this king built a city which he called by his own name, he created in it a mosque, probably the first built in the valley.

Kutub-ud-Dín.—Hindál succeeded him under the title of Kutub-ud-Dín. His reign was disturbed by troubles at the bottom of which was his nephew Hasan Khán. He is said to have reigned fifteen years five months and to have died in 795 A. H.

Working back from this date with the data which our historian has supplied us with, we shall find that Kutub-ud-Dín ascended the throne in ... ... A. H. 781

Shaháb-ud-Dín	...	...	...	761
Alá-ud-Dín	...	...	...	748
Jamshed	...	...	...	746
Shams-ud-Dín	...	...	...	743

We have seen before that it was in 747 Shams-ud Dín came to the throne.

The "Náma-i-Sháhán-i-Kashmír" gives 796 A. H. as the year of Kutub-ud-Dín's death and the Tawarikh-i-Kashmír" gives 795. Lithographed editions of Farishtah give 796 A. H. Prinsep's Tables give 799 A. H. General Cunningham makes it in 1386 A. D. = 788 A. H. The five authorities bring it within a compass of eight years, so that no one of them is very much out. The Muhammadan historian concludes his account of the above reign with an Arabic question و الله اعلم بالصواب and God knows what is right. This is his way of getting out of the difficulty. With our present knowledge it must be ours too.

Sikandar.—It was somewhere about the end of the reign of Richard II, that Sikandar the son of Kutub-ud-Dín ascended the throne of Kashmír. He was young having been born in his father's later years. His mother Súrah looked after his interests. She drove away Sikandar's father-in-law. Rái Mádarí, a noble of the court poisoned Sikandar's younger brother Haibat Khán and thus relieved him of this source of anxiety. But the poisoner fearing the king obtained permission to conquer Little Tibet. This he accomplished and then revolted. Sikandar in person moved against him and Rái Mádarí was defeated and being taken prisoner he poisoned himself. Sikandar then looked after Tibet on his own account.

It was at this time that Taimúr made his descent upon India.

Sikandar at once sent in his submission and gave Taimúr's ambassadors much gold and many presents. Sikandar was ordered to present himself with proper presents on Taimúr's return from Dehli. He got ready all he could. But he was told by sone of Taimúr's servants that he must give at least 3,000 horses 1,00,000 ashrafís. These vast numbers of to him valuable things were unobtainable. He therefore excused himself to Taimúr by saying that he had nothing worthy of being offered to so great a sovereign, but that he would return to his home and prepare a right royal present for him. Taimúr guessed that his nobles had been trying to squeeze all they could out of Sikandar and accepted the excuse. Sikandar got all ready, but when he got out of Kashmír with his gifts, by the pass of Bárámúla he found Taimúr had crossed the Indus and was on his way to Samarqand. Thither he sent ambassadars with his offerings and he himself returned to Kashmír.

Sikandar was an exceedingly generous man. Hearing of this, learned men from Iráq and Khorasán and Mávará-un-Nahr flocked to his court in such numbers that it became an example to the courts of those provinces. Sayyid Muhammad, one of the learned men, instructed the king in all the rites of the Muhammadan religion. But Syah But a Brahman convert to Islám was made prime minister and to him were consigned all the affairs of the state. This minister signalized his term of office by a zeal in the persecution of his former co-religionists such as has seldom been seen in the history of religious turn-coats. The king (of course acting on the advice of his prime minister) ordered all Hindús to become Musalmáns or leave the country. He forbad the use of the tiká on the forehead and commanded that women should not be burned along with their husbands. All idols of silver and gold were ordered to be melted down. Many of the Brahmans rather than obey these orders committed suicide. Other preferred exile. Some few became Musalmáns. The Sultán used every exertion to destroy idols. One famous Máhá Deo and one Chakk Deo were destroyed by his orders, When these idols were broken flames issued from the fracture. These flames were supposed by the Hindus to be miraculous, but the Sultán rightly judged they were caused by the superior science of the Brahmans, and stayed not his hand until all were destroyed. Under one of these temples it was said a copper plate was found with an inscription on it to the effect that the temple had been built by Lilitáwat Rája who had consulted the astrologers as to whether it would remain and how long. The answer was that it should stand 1,001 years and then be destroyed by a person of the name of Sikandar. The Rájá ordered this to be recorded on a copper plate and that this plate should be put in a copper box for safety under the temple. The Sultán is said to have remarked

on hearing the inscription read to him, that had the plate been on the wall he would not have destroyed the temple and thus would have upset the pretensions of the astrologers.

Sikandar by such acts as these earned for himself amongst Musalmáns the title of *Butshikan* or Iconoclast. Like the bigot he was, he forbad all use of wine in his dominions. He at last died of a burning fever in the year 819 A. H. after a reign of 20 years and 9 months. His death took place one year after the battle of Agincourt. Hence his persecution of the Brahmans was contemporaneous with the persecutions of the Lollards in England, and the result was much the same in both countries. Kashmír is now one of the head quarters of Brahmanism and lessons of intolerance learned 500 years ago seem not to have been forgotten.

Alí Sher.—Sikandar left three sons Mír Khán, to whom he gave the kingdom and the title Alí Sher, Sháhí Khán and Muhammad Khán.

When Alí Sher ascended the throne the converted Brahman Syah But was kept on as wazír. His treatment of his former co-religionists became more and more severe. The Brahmans fled the country until not so much as the sign of one remained. Syah But's persecutions soon came to an end for he was carried off by consumption. After his death Alí Sher determined to see the world. He made his brother Sháhí Khán, a young man of great ability, his viceroy during his absence. Going by the way of Jammu Alí Sher was persuaded to return to Kashmír to wrest the reins of government from Sháhí Khán. He was successful and Sháhí Khán became a fugitive in the direction of Síálkot where he met with a Ghakkar named Jasrat who had escaped from the hands of Taimúr in Samarqand and had attained to something like kingship in the Panjáb. Ali Sher followed him. But Sháhí Khán and Jasrat defeated him in a night attack and here he is lost to history. He had reigned six years and nine months when this event happened in 826 A. H. Some authorities say be went on a pilgrimage.

Zain-ul-Abidín.—Sháhí Khán ascended the throne with the title of Zain-ul-'Abidín. The events of the long reign of this the greatest of the Sultáns of Kashmír are given without any reference to their chronological sequence. There is evidently a strong desire on the part of the historian to exaggerate. It is easy to tolerate this. We must make allowances. There is no doubt that the actions of the Sultán were worthy of being chronicled: they speak for themselves. For half a century and more Kashmír was blessed with the rule of this virtuous and tolerant prince.

His first recorded acts were those of conquest, the Panjab and Tibet,

with the aid of Jasrat, coming under his rule. Making his younger brother Muhammad Khán his wazír he gave himself to the administration of justice. He filled his court with the wise of the Musalmáns and Hindus. He himself knew music well. He spent his time in superintending the agricultural improvements of the country and in increasing the means of irrigation. He published a common order that if any theft occurred the headman of the village or town where the theft occurred should be held responsible. Thus theft was banished the country and the bad actions of Syah But were rendered harmless. He abolished also the food rates which Syah But had established. He wrote all his commands on copper tablets and sent them to every town and village. Srí Bihut was made physician and on his application the Brahmans whom Syah But's persecution had driven out of the country were re-called and had lands given to them. The poll tax on Hindus was abolished and the worship of idols was tolerated. The killing of cows was done away with. He made a covenant with the Hindus that he would rule them justly and according to their own law. Everything that Sikandar had abolished he restored, such as the *thíká* on the forehead and even *satí*. He forbad the acceptance of gifts by tahsíldárs. He forbad merchants to hide merchandize in their own houses, and compelled them to expose it for sale at a reasonable profit. He released all the prisoners of former kings. Whatever countries he conquered he divided the treasure obtained amongst his troops. He punished the rebellious and raised up those of low degree. He fed the poor in a moderate fashion, so that they might not "wax fat and kick." He himself kept to one woman,—his wife, and looked on none other with a desire to possess himself of her. He increased the length of the yard and chain. For his own private use he expended the proceeds of his copper mines only. As Sikandar had melted down gold and silver idols, for purposes of coinage, the king gave order that coin should be made of copper from his copper mines. (No *gold* coins of Sikandar have been found. But Zain-ul-'Abidín coined extensively in silver and brass. General Cunningham has I believe gold coins of Harsha Rájah, and the Lahore museum has a gold coin of Yúsaf Sultán.)

Every man was allowed to follow his own religion. No one could act with intolerance to another. All the Brahmans who had forcibly become Musalmáns in Sikandar's time returned to their old religion. The king brought a canal from the mountains and built a city five koss in circumference. He also made other canals and bridges. The cities he built he peopled with learned men and also with the homeless in order that travellers might be fed and the needy relieved. The whole of Kashmír became well-irrigated. In Ver Nág he made a large build-

ing which he called Lánká. This Ver Nág is a large pond, and the erection of a heavy building in it was accomplished much in the same way as the masonry in wells is supported on wooden foundations. The name given to this building was Lanká, but the purpose was Muhammadan. The building was a mosque. But Muhammadan poets and Hindu jogís were received by the king. His wise men solved all kinds of difficult questions at once.

One day a woman in the city got angry with her maid-servant. She wished even to kill her, but she could not accomplish it. So she killed her own child and went unto the king in the morning and said the maid had done it. The matter was laid before the wise men who could make nothing out of it at first. But afterwards they called the maid and asked whether she had done the deed or not. She protested her innocence and was told to show her confidence in her own cause by appearing naked before the assembly. This she refused to do saying she was not going to add to the evil of being accused the additional one of exposure and shame. She was then dismissed and her accuser was called. She was asked whether her accusation were true. She replied, "If it be not, kill me." The assembly replied, "No, but if you are guiltless, strip yourself naked before us." She was proceeding to do this when the king stopped her with, "The crime is yours." The guiltless maid was set free and the guilty woman punished.

The king did not execute persons for theft (he was three hundred years ahead of England) he put them in fetters and made them work at making bricks, &c. He also forbad hunting. During Ramzán he never ate flesh. When his liberality was known, musicians of note flocked to his court. Kashmír became another country with their presence. One scholar of Abdul Qádir of Khorásán was an excellent performer on the lute. Another Mullá Jamíl was both poet and singer. His name is a proverb in Kashmír for excellence in poetry. Jab, a celebrated maker of fireworks was also patronized by the Sultán. He made gunpowder in Kashmír and was well up in other sciences. Dancers too found a patron in Zain-ul-'Abidín. Acrobats made Kashmír their home. None went away unrewarded. Dasúm a Kashmíri poet wrote an account of the events of the Sultán's reign in a book called "*Zain Harab.*" Búdí But, a man who had committed to memory the whole of the Sháh Náma (a prodigious task) wrote a book on music which he repeated before the Sultán. Zain ul 'Abidín himself knew Persian, Hindí and Tibetan. According to his commands books were translated out of Arabic into Hindí, and Hindí books into Persian, &c. He ordered the Mahábhárata to be translated. By his orders *the* history of Kashmír, the Rajáh Taringiní was compiled. He also caused the history of Kashmír to be written in Persian.

Neghbouring rulers hearing of his fame became desirous of his friendship. Abú Sa̤id sent him a present of horses, mules and camels. The Sultán in return sent him some maunds of saffron, pepper, musk, itr, (otto-of-roses) vinegar, shawls, cups and goblets of crystal, and other rarities of Kashmír. The Rája of Tibet sent him two rare swans from the lake of Mansarowar. These pleased the king very much. (The historian adds that when milk and water were mixed together and placed before them, they separated the milk from the water with their bill, and drank the former and left the latter in the vessel.)

At the commencement of his reign he had appointed his younger brother prime minister and his heir. On his death *his* son Haidar was appointed to the offices held previously by his father. Zain-ul-Á̤bidín had three sons, 'Á̤dam Khán with whom the Sultán was always angry; Hájí Khán who was the beloved of his father; and Bahrám Khán his youngest son to whom many jágírs had been given.

Zain-ul-Á̤bidín must have been very rich for it is recorded of him that he gave a kror pieces of gold, (we are not told whether they were coins or not) 400 camel loads, for the repose of the soul of a man whom he had executed because he had been guilty of the death of his brother. (It is very strange that no gold coin of this Sultán has been found. Probably the historian means rupees. The words zar زر and tila تلا are however used in the text.)

In these days the Sultán fell sick. What the sickness was we are not told. But we are told how he was cured. A jogí came and said he could cure the king. He and his disciple gained admission to the king's chamber and after some time the jogí was taken away weak and faint. He said he had given the king his own spirit and had taken the king's spirit into his own body. The author is puzzled to account for the king's getting better. He supposes the jogí to have been a second Elijah and to have prayed over the king who at any rate recovered. The jogí was suitably rewarded.

It is more than we have a right to expect that Á̤dam Khán should be always content with his father's preference of Hájí Khán his next younger brother. Á̤dam returning from a successful expedition against Tibet (Tibet was the Algiers or Tunis of Kashmír in those days) brought with him much plunder and of course pleased his father. Hájí Khán was ordered to Lauharkot and Á̤dam was ordered to stay with the Sultán. Hájí went but without permission returned. He evidently thought Á̤dam was trying to work himself into the good graces of his father. The Sultán ordered Hájí back but he refused to go, and a battle was fought at Pulpul in which the elder brother and the Sultán were victorious. Hájí escaped to Bhimber. The king made a pyramid

of the heads of his opponents. The result of this rebellion was that Ádam Khán was made heir to the Snltán and after this there were six years of peace.

A famine is recorded about this time. The Sultán distributed amongst the people the contents of the granaries and although the famine was very severe it was met. It may have been owing to the famine (we do not know) that the king reduced the taxation to a fourth part of the produce in some places and to a seventh part in others.

Ádam Khán seems to have been a really bad man. In his government of Kamráj* he was so oppressive that the people complained to the Sultán. Ádam rebelled. He was, however, quieted by some strange action of his father. But Zain-ul-Ábidín knew his two sons. He recalled Háji Khán and with his aid he drove Ádam out of the valley. On returning home the Sultán presented his own sword to Háji and made him his heir. When freed from his brother and at peace in Kashmír Háji took to drinking and caused the Sultán much anxiety. At this juncture the king was seized with dysentery. Háji being constantly intoxicated, the affairs of the kingdom became confused. The nobles therefore secretly recalled Ádam Khán and he came and saw the king, before whom he stated the condition of affairs and asked him to appoint his successor. This the king neglected to do. Bahrám, the youngest brother, made the most of this opportunity and sowed the seeds of dissension between Ádam and Háji. The result was that Ádam retired to Kutub-ud-Dinpúr. The Sultán became worse daily. The nobles fearing the jealousies of the brothers would break out in disturbances, would not allow them to see him. Occasionally they placed the king on the throne and ordered the drum to be beaten as though nothing was amiss. Háji and Bahrám went out daily armed against Ádam. The Sultán hearing of this became worse and lost the use of his limbs and became delirious. One night Ádam went into the city alone to see his father. On that night the nobles assembled to elect Háji as successor to the throne. Ádam was expelled the city and Háji obtaining possession of the king's stables and treasury was acknowledged Sultán. Ádam went by the Bárámúlla pass to India. At this time Hasan Khán joined his father Háji Khán from Poonch. This help was very opportune.

Zain-ul-Ábidín reigned in all 52 years. He died aged 69 in the year 877 A. H. His reign was long and to a certain extent prosperous. But its close is not a pleasant sight to contemplate. There was evidently no fixed and settled law in the land. Everything depended on the king. The nobles, as we have seen, now and then exercised

* The valley of the Pohrí is called Kámráj. Pohrí joins the Jhelum on the right bank just below Sopúr. Kámráj is therefore the N. W. valley of Kashmír.

certain functions. But their position and their privileges were undefined. There were elements of stability and lawfulness in the land, but they wanted to be worked up. There was no idea of freedom and without this, these very elements of stability became each a nucleus of selfishness and intrigue. The results were soon seen in the anarchy which ensued under the rule of nominal kings who were placed on the throne as a mark for the machinations of the different parties who were seeking pre-eminence for purposes of self-aggrandisement and plunder.

(Of three historians whom I have consulted one gives the death of Zain-ul-Ábidín in 884 A. H. and another in 878, and the third in 877 A. H. Now the coins of Haidar the successor of Zain-ul-Ábidín have on them 874 A. H., and he reigned as we shall see only one year and two months. Hence if the coins are right, all the historians are wrong. I incline to think the coins are correct.)

Haidar Sháh.—Hájí Khán taking the title of Haidar Sháh was crowned king, his brother Bahrám and his son Hasan placing the crown upon his head. The province of Kamráj was given to Hasan in jágír with the title of Amír-ul-Umrá and heir-apparent. Bahrám received as his jágír the province of Nágám.* Haidar satisfied only a portion of the nobles who came to his coronation. Many returned dissatisfied. As the Sultán was unacquainted with the country, these nobles oppressed their people as much as they liked. Haidar made his barber Lúlú his confidante and favourite. This low fellow at once showed his nature by taking bribes from all quarters, and by leading the Sultán into all kinds of evil. Hasan Khán Kachhí a worthy noble, was executed by Lúlú. At this time Ádam Khán, having gathered together an army arrived in Jammú, but when he heard of the fate of Hasan Kachhí he advanced no further. He stayed in Jammú and made himself useful in resisting the Moguls who were then troubling the country. In a skirmish he was hit in the face with an arrow and killed. Haidar, hearing of his death, had his corpse removed to Kashmír and caused it to be buried near the tomb of his father. Meanwhile the king's inebriety became confirmed and at last he became ill. The nobles secretly desired to make Bahrám king. The son of Ádam Khán, Fath Khán, hearing of this in Sirhind where he was engaged in reducing forts and towns by order of Haidar, returned suddenly to Kashmír with much plunder. But his coming was not acceptable to the king. Things came rapidly to a crisis however. For Haidar one day getting intoxicated fell from the roof of his house and was killed after a reign of 14 months.†

Hasan Sháh.—By the exertions of Ahmad Aswad (the Black)

* Nágám, South of Srínagar in the lower hills.

† For Coin of Haidar, see No. 31, Pl. III.

Hasan the son of Haidar was proclaimed king. His opponents were imprisoned. The treasuries of the Sultán were opened and much money was distributed. Ahmad was made prime minister and his son Nauroz was made kotwál of the city. Bahrám Khán seeing the kingship had slipped out of his hands fled in the direction of India. Hasan began by renewing the edicts of Zain-ul-'Abidín which in the reign of Haidar had fallen into disuse. For this reason several discontented nobles fled to Bahrám Khán and got him ready for an invasion of Kashmír. Others wrote letters to him and invited him to the country. Bahrám returned by the way of the mountains to Kamráj. At last a battle was fought in which Bahrám and his son were captured. They were both thrown into prison. After awhile Bahrám was deprived of his eyesight by a needle being drawn through the eyes میل در چشم کشید and he died after a short interval from the agonies endured in this fearful operation.

It seems that an enemy of Ahmad's by name Zain Badr a wazír of Zain-ul-Ábidín's was one of the principals in this dreadful business. Hasan Sháh had him at once apprehended and with the very needle that Bahrám had had his eyesight destroyed, he himself was rendered blind. He remained in prison for three years after this and then died. Ahmad Aswad thus became strong. He sent Malik Bárí Bihut to assist the Rájah of Jammú, against Tátár Khán, who had been sent by the emperor of Dehlí to govern the Panjáb, and who was harassing the borders of Kashmír. They plundered some parts of the Panjáb and destroyed the town of Síálkot.

Hasan had two sons by Haiyát Khátún daughter of Syud Hasan, one was named Muhammad who was confided to the care of Malik Bárí Bihut; the other Husain was given into the hands of Malik Nauroz the son of Ahmad Aswad to be educated. The usual thing happened. Ahmad Aswad and Bárí Bihut got at loggerheads with each other. They each tried to oust the other. The nobles took up the quarrel. At last things grew to such a pitch that they fought in the very presence of the king. Malik Ahmad Aswad fared the worse of the two. He was sent to prison with numbers of his followers and all his goods were confiscated and he himself died in prison. Sultán Hasan then recalled to Kashmír an exile named Syad Násir who had been near Zain-ul-Ábidín, but the Syad died when near the Pír Panjál pass. For this reason the Sultán sent to Dehlí for his wife's grandfather Syad Hasan. The new comer soon turned the nobles against the Sultán and besides this executed great numbers of them. He also imprisoned Malik Bárí. The rest of the nobles seeing this fled. Jahángír Mákarí in his flight found refuge in Lauharkot. At last Hasan Sháh from over uxoriousness از کثرت جماع drew nigh unto death. In his last moments he con-

signed his children into hands he thought worthy of the charge. He appointed Yúsuf Khán, the son of Bahrám Khán, who was in prison and Fath Khán son of Ádam Khán who was in Jasroth their guardians and Muhammad Khán his successor. Sayyid Hasan outwardly concurred. The Sultán shortly after died. The historian adds "the duration of his reign is not known." One MS. I have consulted says he died in 897 A. H. Prinsep puts in it 891 A. H. His silver coins are dated 876 A. H. on the obverse in figures. According to Farishtah this is one year before the death of Zain-ul-'Abidín. The histories I am inclined regard as mistaken. The reverses of the coins adhere to the 842 in words of Zain-ul-'Abidín's coins. Hence it was all the more necessary to put the real date of the king somewhere on the coin. They therefore placed it *in figures on the obverse along with the name.* See figs. 3 and 4, Pl. I.

Muhammad Sháh, 1st time.—Muhammad Sháh was but 7 years of age when his father died. Sayyid Hasan was the chief agent in securing the throne for his grandson. Regencies have always been prolific in disturbances even in countries where there is a settled law. We shall not be surprised therefore to find that, in Kashmír, where there was no law of succession, the disturbances were many and frequent.

When the treasury was opened to the young king, and the wealth of the state and its resources were exhibited to him, he is said to have laid hold of a bow rather than on the gold and silver. From this the Kashmíris augured that he would prove a brave and warlike ruler.

But the Sayyids were at that time all-powerful in council. No one could approach the king. At that time the Rájah of Jammú was a refugee in Kashmír, from the tyranny of Tátár Khán Lodí the governor of the Panjáb. The Kashmíris getting the Rájah to help them murdered Sayyid Hasan, and thirty of his slaves, and then crossing the Jhelum destroyed the bridge. Meanwile Sayyid Muhammad, uncle of the king, took care of him. Another Sayyid murdered the son of Bahrám Khán in prison because a section of the community desired to raise him to the throne. The upshot of things was that the Sayyids and the popular party came to blows. The city became a prey to both parties. Jahángír Mákarí of Lauharkot was invited to assist against the Sayyids. His son Dáúd Khán Mákarí was sent. But in an engagement with the Sayyids he was slain, together with numbers of his friends. Pyramids were made of the heads of the slain. The next day the battle was renewed on the bridge, which, breaking in the middle of the battle caused great loss on both sides. At this juncture the Sayyids asked Tátár Khán Lodí to assist them. He sent a large army, but when it arrived at Bhimber it was destroyed. The cause of the Sayyids became desperate. The popular party began to look up and take heart. The city was plundered by the

latter and destroyed by fire. In this fire 10,000 men are said to have lost their lives. This occurred in 892 A. H. The Sayyids were entirely defeated and expelled the country. The popular party got the king into their power and on their side. Paras Rám, the Rájah of Jammú was rewarded and dismissed.

The popular leaders being thus left to themselves, each one began to seek place and power for himself. In the midst of this confusion Fath Khan, grandson of Zain-ul-'Abidín gathering an army prepared to contest the throne with Muhammad Sháh. He proceeded as far as Rájáorí, but in a battle fought at Adún he was defeated as Jahángír Mákarí kept true to the popular party. In a second battle he was again defeated. He then went to Jammú where collecting an army he prepared to invade Kashmír a second time. Jahángír Mákarí, who seems to have been recognized as the head of the popular party recalled the Sayyids who had been exiled and joined them to his side. In the battle which was fought with Fath Khán many of the Sayyids were slain and the rest remained faithful. So Fath Khán was again defeated. But he was not turned from his purpose. Again collecting an army he a third time invaded Kashmír and was successful. Muhammad Sháh was made over to him and Saifí Wángarí was appointed his keeper. Jahángír Mákarí fled and hid himself. Sayyid Muhammad, the father-in-law of Muhammad Sháh joined himself to Fath Khán. Muhammad Sháh had reigned 10 years and 7 months, Farishtah says, but other authorities say 2 years and 7 months. The copper coins of Muhammad Sháh abound. The dates on the reverse of them in Arabic words are as a rule perfectly unintelligible. His silver coins are very rare. All I have seen yet have had the date in words on their reverse 842 A. H. I have seen four with the date 842 A. H. on the obverse under the name. (See figs. 5 and 6, pl. I and fig. 32, pl. III). They do not help us in the slightest in the history of Kashmír. They only add to our confusion.

Fath Khán came to the throne in 894 A. H. and assumed the title of Fath Sháh. The prince Muhammad Sháh was therefore but a lad of about 10 years of age. (Just about this time in England, Edward V and his young brother were murdered in the Tower. Fath Sháh was not so bad as Richard III. He ordered the food and drink of the prince to be prepared according to his order and gave him a place in the palace along with his own brothers.)

Fath Sháh made Saifí Vánkarí or as another authority has it Saifdár his prime minister. This Saifí was famous for his justice. At this time a new religious teacher named Mír Shamsí came into Kashmír from Persia. He initiated the people in the Shía doctrines under the

semblance of teaching Sufiism. After the death of this teacher a quarrel arose between his followers and the other Muhammadans, and to that extent was it carried on, that the rival parties fought in the very presence of the Sultán.

Muhammad Sháh was taken out of prison by Malik Ajhí and Malik Zína, but when they found he was not particularly favourable to their plot, they tried to put him in prison again. Hearing of this he fled to his father's place.

After this Fath Sháh must have become reconciled to his two ministers, for the history says that he divided Kashmír between them and himself, each taking one-third. More than this he made Malik Ajhí his prime minister and Sankar his Chief Justice. (Here we have great confusion. Malik Ajhí is called in other books Malik Gájí or Gází Chakk, while Sánkar or Vánkarí is called Saifdár.) A story is given of the justice of the prime minister. A quarrel had arisen as to the possessorship of a ball of silk. The plaintiff and defendant each swore it was his. The Prime Minister asked whether it had been wound on the fingers or on a spindle. Plaintiff said "on the fingers:" defendant, "on the spindle." They unwound the ball and found that it had been wound on the fingers, hence it was made over to the plaintiff.

After some time had passed Ibrahím the son of Jahángír Mákarí went to Muhammad Sháh and brought him back to Kashmír. A great battle was fought near Kohášála in which Fath Sháh was defeated and he fled by the way of Hírapúr into India having reigned nine years. (There is the greatest confusion in the histories of this period. Saifí reigned in reality not Fath Sháh. A Malik Musá Zína, named above, obtained supreme power. After him Ibrahím reigned 40 days. Then Malik Osmán reigned two months. Then Jahángír Mákarí had an innings. Most of these nobles attained supreme power a second time before Muhammad Sháh's restoration.)

Muhammad Sháh. 2nd Time.—Muhammad Sháh obtaining the throne a second time made his helper thereto his prime minister and appointed Sikandar Khán his heir. The sons of Ibrahím Mákarí put Malik Ajhí to death in prison. Fath Sháh soon after this returned with a mighty host and Muhammad Sháh not being able to meet him in the field fled without a battle being fought. He had reigned only 9 months and 9 days.

Fath Sháh. 2nd Time.—Fath Sháh on ascending the throne of Kashmír a second time made Jahángír Badrah his prime minister and Sankar Zína his chief justice. He reigned with great judgment. Muhammad Sháh being defeated took refuge with Sikandar Lodí of Dehlí, who sent a large army to help him. Jahángír Badrah being dissatisfied with Fath

Sháh went over to Muhammad Sháh and brought him by way of Rájáorí to Kashmír. Fath Sháh made Jahángír Mákarí general of the van of his army. In the battle which ensued Fath Sháh was defeated, and that general together with his son was slain. Fath Sháh himself fled to India and there died. (The Tawaríkh-i Kashmír places this event in 925 A. H.)

Muhammad Sháh. 3rd Time.—Muhammad Sháh on assuming the reins of government for the 3rd time imprisoned Sankar Zíná and made Malik Gájí Chakk, who was famous for his bravery and wisdom, his prime minister. This Gájí was famous for his discernment. One instance is given. A writer had a wife. By accident he left her for some time. She, during his absence, becoming impatient, married a second husband. On the first husband appearing again on the scene, a quarrel arose. The woman gave the lie to her first husband. To settle the matter, the three resorted to Gájí Chakk. As there were no witnesses, he had recourse to his own wit and said to the woman: "I believe you to be a truthful person and the writer to be a liar, kindly put some water into my inkstand, in order that I may write you a deed of separation from him, that, in the future he may give you no trouble." The woman, who probably cared more for her second husband, put in the water with great care. Gájí again ordered her to put in a little more. She did so, using the same care as before. Seeing her thus desirous of obtaining the ink for the deed of separation, the Malik at once turned to the officers of his court and said—"This woman is the wife of the writer." She at last confessed that this was the truth and the case of the second husband was dismissed, let us hope, with costs. (I have no doubt that Gájí Chakk is Ajhí whose death is announced in the 2nd Time of Muhammad Sháh's rule. Anachronisms like these abound in the confusion of the period.)

When Muhammad Sháh became finally settled on the throne he punished Saifí Vánkarí and others who had opposed him. Sankar Zíná had died before. The body of Fath Sháh was brought to Kashmír and was buried near the tomb of Zain-ul-'Ábidín in 922. (According to Tawáríkh-i Kashmír, 925 A. H.) Malik Gájí Chakk imprisoned Ibrahím, but his son Abdál Mákarí went to India and thence getting help he brought Sikandar Khán the son of Fath Sháh and proclaimed him king. (برداشته بشاهي is the phrase used.) It says nothing about coins or I should be inclined to assign my first silver coin No. 1, pl. I to this Sikandar). Gájí Chakk and Muhammad Sháh made preparations in Nolpín in the Parganna of Máhekal. This was in 931 A. H. Sikandar, not being able to meet them took refuge in the fort of Nágám. Gájí Chakk sent his son Mas'aúd against him but he was killed. Neverthe-

less Sikandar being unsuccessful in Nágám fled from it. قلعه ناکام گذاشته بنا گام (there is a pun here we cannot reproduce in English). The Mákarí following fled along with him. Muhammad Sháh then became firmly seated on the throne. As usual, the king, listening to Gáji Chakk's enemies, drank in their calumnious accusation, and turned against the man who had made him king: Gáji being under suspicion went off to Rájáorí and there joined the Rájah of that part. During this time Sikandar Khán, obtaining help from the Mughal Bábar took possession of Lanharkot. Malik Bárí brother of Gáji Chakk hearing of this attacked him and taking him prisoner sent him to the king, who being pleased with such loyalty became reconciled to Gáji Chakk and restored him again to office. Poor Sikandar had the needle drawn through his eyes and once more Muhammad Sháh was at peace.

It seems that when Muhammad Sháh took refuge with Ibrahím Lodhí at Dehlí he took with him his son Ibrahím Khán. This son was kept at Dehlí by the Emperor, while the father was sent to Kashmír with a large army. Now at the time of the affair of Sikandar Khán, Ibrahím Lodhí owing to disturbances in Dehlí took refuge in Kashmír. Malik Gáji Chakk, who was displeased with the king for blinding Sikandar Khán, by every means he could devise, threw all the courtiers of Muhammad Sháh into prison and then imprisoned the king himself and made Ibrahím Khán king. (Here again comes the phrase پشاهي برداشته hence we must own that Sikandar also was proclaimed king and therefore that he probably struck coins.) Muhammad Sháh had reigned 11 years 11 months and 11 days.

Ibrahím Sháh.—Ibrahím Sháh made Malik Gáji Chakk his prime minister. Abdál Mákarí son of Ibrahím Mákarí having fled from the tyranny of Gáji Chakk went to the court of Bábar and asked from him help in the shape of an army wherewith he might conquer Kashmír. This was granted and Shaikh Alí Beg and Mahmúd Khán were appointed its generals. Abdál perceiving that the Kashmíris would despise the Mughal soldiers pretended he was coming to promote the claims of Názuk Sháh (Nádir?) the son of Ibrahím Sháh. Malik Gáji Chakk, bringing with him the king Ibrahím, advanced to meet Abdál as far as Saláh in the parganna of Bánkul. Abdál sent a message to Gáji saying that as he was come with a Mughal army from Bábar the conqueror of Ibráhím Lodhí, whose army had exceeded five hundred thousand soldiers, it would be well for him at once to swear allegiance to this all-powerful sovereign, or if not to fight at once. Gáji, like a true soldier, preferred to fight. In the battle which ensued the slaughter was very great: many nobles of Ibráhim were slain, amongst whom were Malik Tází and Shere Malik. After the battle Gáji fled to the mountains, and

it is not known what became of Ibrahim Sháh : he disappeared no one knows where or how or in what direction. He had reigned 8 months and 5 days. (For a coin of our Ibrahim Sháh, see No. 16, Pl. II.)

Názuk Sháh (Nádir ?).—Názuk Sháh (I retain this word because all the MSS. seem to have it, but all the coins have Nádir) on ascending the throne of his forefathers, set himself to encourage the natives of Kashmír, who were uneasy about the Mughals. The natives were pleased with him and took him to Náoshera the old capital of the Sultáns of Kashmír. Abdál Mákarí became his prime minister. He pursued Malik Gáji Chakk to the confines of Jahalnagarí, but could not take him prisoner. He then returned and busied himself in the settlement of Kashmír. He divided the country into four parts, one he kept himself, one he gave to Shaikh Mír Ali, and one was given to the soldiers. (A MS. in the British Museum adds, one was given to Lanhar Mákari and one to Malik Zangí Chakk.) To the allies he had obtained obtained from Bábar he gave many presents and dismissed them in the direction of India. Then he sent a letter of harsh rebuke to Malik Gáji Chakk, but Muhammad Sháh he again recalled from his prison of Lanharkot and the two entered Kashmír as friends and thus Muhammad Sháh was again set upon the throne.

Muhammad Sháh. 4th Time.—Muhammad Sháh as a tribute of gratitude to Názuk Sháh who had reigned 20 years and 20 months (?) made him the heir-apparent. In this year died Bábar the first Mughal Emperor of Dehlí and he was succeeded by Nasír-ud-Dín Muhammad Humáyún. This we know was in the year 937 A. H. Here we get therefore to land at last. The whole of the reigns of Muhammad Sháh and his rivals is one tangled mass of confusion. There is no reliance whatever to be placed in a historian when he makes a man reign exactly the same number of years, months and days. We read 11 years and 11 months and 11 days and 20 years and 20 months! No two histories agree. One MS. in the British Museum omits Názuk Sháh altogether. Many men undoubtedly ascended the throne in this time of confusion. The date of Abdál Mákarí's invasion of Kashmír with the aid of the Mughals is placed in a MS. in the British Museum at 935 A. H. This would make the reign of Názuk Sháh more like 20 months in length. We may I think take the above date 937 A. H. as correct. After a year Malik Gáji Chakk, who had taken refuge in the mountains returned and beseiged Kahrár, Abdál Mákarí went to meet him and defeating him pursued him to Bhír. At this time the Panjáb was governed by Kámrán, the brother of Humáyún, Shaikh Alí Beg and Muhammad Khán the leaders of the allies who had helped Abdál Mákarí, and who had left him without permission, went to Kámrán and represented to him how easy it would be to conquer

Kashmír by their assistance. Kámrán at once consented to do so and appointed Muharram Beg to co-operate with these two worthies. As soon as the Kashmíris heard of the approach of the Mughals they fled for fear to the mountains leaving all they possessed in their houses. The Mughal soldiers plundered and burnt to their hearts' content: all the Kashmíris who dared to leave the mountains to fight for their homes were slain. At first Abdál Mákarí thought Malik Gájí Chakk was at the bottom of this invasion. When he found, however, that he was not in the Mughal army, he sent for him and his sons and entered into a compact with them. Joining their forces together, the two leaders took heart and, attacking the Mughals, utterly routed them and drove them back to their own country. But after this Malik Gájí Chakk could not endure the prosperity of Abdál, so he betook himself to Bhír and there resided. In this year, which was 939 A. H. (the MS. in the British Museum agrees with this date) the Sultán of Káshgar, Saíd Sháh, sent his son Sikandar Khán together with Mírzá Haidar and 12,000 soldiers by the way of Tibet and Lár to invade Kashmír. The inhabitants, fearing the hardy valour of the central Asians fled from their homes in all directions and took refuge in the mountains. The invaders, finding everything open before them, destroyed the palaces of the olden kings and levelled them with the dust. The city was burnt. The treasury and the buried treasures were plundered, and the whole army of invaders was laden with goods and gold. Wherever the Kashmíris were found hidden they were pursued and slain or imprisoned. This state of things lasted for six months. Meanwhile Maliks Gájí Chakk and Abdál Mákarí, together with other nobles, took refuge in Chakdara. But not agreeing to stay there, they went to Kháwara and Báradár. From this place by the way of Bádah they descended from the mountains and engaged in battle with the Mughals, the leaders of whom were quite willing to risk an engagement. The encounter was long and bloody. Many great and brave men on both sides were slain. The Kashmíris at one time wished to turn their backs on the field, but Malik Gájí Chakk exhorted them to play the man and remain firm. They also obtained the aid of more Kashmíris. The slaughter on both sides was awful—the dead were numberless. The struggle lasted from morning till night. In the evening the prisoners were numbered on both sides and were liberated and both armies were ready to accept peace. The Káshgar party, taking with them presents of wool, hawks, and precious things, went to Muhammad Sháh and asked his daughter in marriage to Sikandar Khán, and desired that the women whom the Mughals had in their hands, should there remain. Peace being thus concluded, the central Asians returned to their homes, and peace once more reigned in

Kashmir. In this year two comets appeared and their advent was succeeded by a great famine so severe that many people perished with hunger while others fled into exile rather than remain in their own land to starve. The massacre of Zuljir was regarded no less severe than this famine in its effects. It (the famine) lasted ten months. When the orchards bore fruit it disappeared. No sooner was the country freed from external enemies and internal troubles than the leaders of the people Gáji Chakk and Abdál Mákarí disagreed. The former took up his residence at Zainpúr and the latter remained in office as wazír. Governors and rulers did as they liked. No man obtained justice. After a short time Muhammad Sháh died of fever, having reigned 50 years. Before his death, he distributed all the gold he had amongst the poor of the country. This 50 years must reckon from 891 A. H. and include all the reigns of Fath Sháh and Názuk Sháh.

Shams-ud-Dín.—It seems that this prince Shams-ud-Dín sat on the throne of his father Muhammad Sháh. Guided by his ministers he divided the whole of Kashmír amongst the nobles. The people were pleased with his rule. Gáji Chakk and Abdál Mákárí renewed their disagreement and the former got possession of the young prince and took him in the direction of Kúswár. Abdál Mákarí opposed him, but the two agreeing he withdrew to Kamráj where his states were while Gáji Chakk and the king went to Srínagar. Again Abdál Mákarí showed uneasiness and again quiet was restored. Nothing more is known of the history of this king. (The two coins I assign to him are very poor indeed. Nos. 11 and 12, pl. I. The obverses are so illegible I have not drawn them. I have not seen a copper coin of this king yet. It is just possible that these silver coins may be those of the first Sultán.)

Názuk Sháh. 2nd Time.—After his father Názuk sat on the throne of the kingdom. (His father we are told was Ibrahím Sháh. There is confusion again here.) He had not, however, reigned more than five or six months when Mírzá Haidar Turk, having obtained a firm footing in Kashmír ruled it. In his time the Khutba was read and coins were struck in the name of *Násir-ud-Dín Muhammad Humáyún Bádsháh.* (The coins of Humáyún struck in Kashmír are exceedingly rare. They are exactly of the same type as those of the preceding kings. There are some small differences in the inscriptions in the arrangements of the letters. (See Nos. 13 and 14, pl. I.) One coin has a ح in the field to the right, which I consider to be the first letter of Haidar's name. (See No. 33, pl. III.) The dates of the coins fall within the period during which Mírzá Haidar ruled Kashmír nominally in his master's name. But all these ten years poor Humáyún was a fugitive in Sind

and Persia and Affghánistán and he never derived any benefit frem the fact that prayers were used in Kashmír with his name in them, and coins current with his name on them.)

In the year 948 A. H. when Humáyún, flying before Sher Sháh Súrí, reached Lahore, Malik Abdál Mákarí, Zangí Chakk and other petitioners wrote about Humáyún's taking Kashmír and sent the letter by the hands of Mírzá Haidar. The emperor dismissed the Mírzá in the direction of Kashmír and gave it out as his intention to follow shortly himself. When the Mírzá arrived at Bhír he was met by Abdál Mákarí and Zangí Chakk. The Mírzá had with him only three or four thousand horsemen, but when he arrived at Rájáorí, Malik Gájí Chakk who was the ruler of Kashmír, arrived at Khabal Kartal (it is called Karmal by Erskine) and entrenched himself with from three to four thousand horsemen and 50,000 infantry. Mírzá Haidar therefore changed his route and went by Pabhaj (the Pamíj of Erskine) which Gají Chakk in his pride had forgotten to defend. The Mírzá crossed the mountains and descending into the plain of Kashmír took possession at once of Srínagar. Abdál Mákarí and Zangí Chakk finding themselves strong, busied themselves with the affairs of the kingdom, and they gave several pergunnahs to the Mírzá. But just at this time Abdál Mákarí, died after recommending his sons to the care of the Mírzá.

After the arrival of Mírzá Haidar in Kashmír, Malik Gájí Chakk went to Sher Sháh Afghán for assistance. He obtained five thousand horsemen, over whom were Husain Sharvání and Ádil Khán; and two elephants. Mírzá Haidar met him between Danahdyár and Káwah, and the zephyr of victory blowing in favour of the Mírzá, the Malik and his Affghán allies fled from the field and took possession of Bahrámgalla.

In the year 950 A. H. Mírzá Haidar settled himself in the fort of Indarkot. Zangí Chakk being suspected by him fled to Gájí Chakk and in 951 A. H. the two set out, in the direction of Srínagar, determined to root out Mírzá Haidar. Bahrám Chakk, son of Zangí Chakk arrived first at Srínagar, but he was easily put to flight by two of the Mírzá's generals, and his disorganized troops falling back on the main army Zangí Chakk and Gájí Chakk also fled and returned to Bahrámgalla. After this the Mírzá employed his army in invading Tibet. He took Lansúr and many other large forts.

In 952 A. H. Gájí Chakk and his son Muhammad Chakk died of fever and ague. This year the Mírza spent in ease.

In 953 A. H. Zangí Chakk fighting with Mírzá Haidar was killed. His head with the head of his son Gází Khán were presented to Haidar.

In 954 A. H. ambassadors came to the Mírzá from Káshgar and he went with many nobles as far as Lár to meet them. In Lár the head of

Khwája Ujh son of Masaúd Chakk was brought to him. This man had for the space of seven years been fighting in Kamráj, but at last he had desired peace. Mírzá Mírak, swearing that all should be right, asked him to attend on him to make a treaty. But when Ujh came into the assembly he was stabbed by Mírak and he fled to the jungle pursued by Mírak who took his head off and sent it to Mírzá Haidar. Ide Zíná was far from pleased at seeing it, and, standing up in anger said, that after an oath and covenant had been made the slaughter of one man was not necessary. Haidar replied that he was not privy to the circumstances of the death.

After this Mírzá Haidar turned his attention to Kishtwár. Bandagán Kukah, Muhammad Mákarí and Yahí Zíná led the van. The Mírzá took up his abode at Jhápúr near Kishtwár. The van, doing three days' journey in one descended on Dahlot, where the river winds, and they were not able to ford it, for the enemy too opposed them. The next day the army of Haidar made a diversion to the right in hopes of reaching Kishtwár, but when they reached the town of Dhár, gusts of cold air laden with dust came down upon them, the day became dark and the people of the town made an attack on them. Bandagán Kukah with five other men was slain. The rest of the army with a thousand exertions at last joined themselves with Haidar. The Mírzá was not successful: he was obliged to retrace his steps ingloriously.

In 955 he turned his attention to Tibet. Taking Rájáorí he gave it to Muhammad Nazír and Násir Alí. Paklí he gave to Mulla Abdullah and Little Tibet he gave to Mullah Qásim. Conquering Great Tibet, he appointed Mulla Hasan its governor.

In 956 he took the fort of Danel. At this time Ádam Ghakkar came before the Mírzá and asked him to pardon Daulat Chakk. He agreed to do so and Ádam called Daulat into the tent. The Mírzá, on his coming in, showed him no honour. For this reason Daulat became very angry, and taking away the elephant he had brought as a present, he went away. The courtiers wished to pursue him but the Mírzá forbade them. After some time Haidar returned to Kashmír. Daulat Chakk and Gází Khan and Jai Chakk went to Haidar Khán who had fled from Islám Sháh to Rájáorí. When Islám Sháh who was pursuing the Niyázís arrived at the town of Madawár from Naoshahra, Haibat Khán Niyází sent Sayyid Khán to him. Sayyid Khán making propositions of peace gave up the mother and son of Haibat Khán Niyázi to Islám Sháh who turning back went to the town of Bán near Siálkot and agreed to the conditions. The three Kashmíris above-mentioned then took Haibat Khán to Bárámúla and wished to take him to Kashmír, and carry away Haidar. As Haibat did not see his way to doing this he sent

a Bráhman to Haidar with conditions of peace. When he had received a promise from Haidar he went to live at Hír (Nír in MS. No. 6571 opening 190 in British Museum) in Jammú and the Kashmíris went to Islám Sháh. Ghazí Khán Chakk, however, went to Mírzá Haidar. (It is evident that at this time the Kashmíris were tired of Haidar. They wished Islám Sháh to be king. We do not read that Islám ever went so far as Kashmír. The nobles, however, must have struck coins in his name, using the formula *struck in Kashmír* on the reverse. I have seen two coins of Islám Sháh of this time. No. 15, pl. I is of this king. It was a common practice to strike coins anticipating events which did *not* come to pass. The date on this coin is 957 A. H. It may have been struck by Haidar as a compliment to Islám Sháh.)

In the year 957 A. H. Mírzá Haidar being at peace with his neighbours sent presents of saffron to Islám Sháh by the hands of Khwájah Shams Mughal. In the following year Islám Sháh sent the ambassadors back with presents of silk cloth and goods accompanied by Yásín (Básín in above MS.) as envoy. Mírzá Haidar sent back Yásín laden with shawls and saffron to Islám Sháh.

Mírzá Qarrá Bahádur was appointed governor of Bhirpul (or Bharmal) and along with him were sent from amongst the Kashmíris Ídí Zíná and Názuk Sháh, Husain Mákarí and Khwájah Hájí. The whole of these with Mírzá Qarrá came back to Indarkot and went thence to Bárámúla and became rebellious. The reason of this rebellion was that the Mughals (the forces of Mírzá Haidar) were not acceptable to them. When the Mughals informed the Mírzá of this he told them they were no less ready than the Kashmíris to rebel. Husain Mákarí sent his brother Alí Mákarí to Mírzá Haidar to make excuse for the Kashmíris and to call again the army. Haidar was not aware of the condition of things, and told them that the Kashmíris were powerless and that there was no use in calling the army.

On the 27th of Ramzán a great fire burst out in Indarkot. Mírzá Qarrá and his following sent word that their houses were destroyed, and asked for orders saying that if convenient they would rebuild their houses and next year go to Bhirpul. Mírzá Haidar was displeased at this conduct. Nevertheless whether he would or not the army went towards Bhirpul. At night time, however, Ídí Zíná and the rest of the Kashmíris left the Mughals and came to the pass of Bhirpul and took with them Husain Mákarí, Alí Mákarí and others in order that they might not be slain by the Mughals. When it was morning the men of Bhirpul fought with the Mughals who were fastened in the mountains. Sayyid Mírzá fled and went into the fort of Bhirpul. About 80 Mughals, men of note were slain in this affair. Muhammad Nazír and Mírzá

Qarrá Bahádur were captured. The rest of the army came to Bahrámgalla. When Mírzá Haidar heard of this he was sorely vexed and ordered all the silver vessels to be broken and the coin now current in Kashmír was struck from them. Jahángír Mikarí at this time got into favour and the estates of Husain Mákarí were bestowed upon him. Tradespeople had horses and outfits given to them and were made soldiers. After this news came that Mulla Abdullah, hearing of the exodus of the Kashmiris, was coming to Kashmír. When he got near to Bárámúla the Kashmiris crowded on him and slew him. Khwájah Qásim was slain in little Tibet. Muhammad Nazír was imprisoned in Rájáorí. The Kashmiris leaving Bahrámgalla came to Hambarapúr. Mírzá Haidar was thus forced to fight them and he came to Indarkot. He had with him only a thousand men. With him were Mughal nobles who had 700 men more. The whole took up a position in Shaháb-ud-Dínpúr. Daulat Chakk and Ghází Khán Chakk went to Hambarapúr to help Ídí Zínà and coming from that place assembled in Khánpúr. Mírzá Haidar took up his position in the plain of Khálidgarh near Srínagar. Fath Chakk, whose father had been slain by the Mughals, Khwájah Bahrám brought, with 3,000 men to Indarkot to revenge his father's death. They burned all the palaces of Mírzá Haidar in the Safá gardens. When Mírzá Haidar heard of this he said, "I have not brought this from Káshgar that I might by the grace of God, again build it." Jai Alí in revenge burnt the palaces of Zain-ul-'Abidin in Suryápúr, but this did not please Mírzá Haidar and the army burnt the palaces of Ídí Zínà and Nauroz Chakk in Srínagar. Mírzá Haidar himself took up a position in Khánpúr in which place was a willow tree under which 22 horsemen could stand. If one branch of this tree were shaken the whole tree was moved. At last the Kashmiris came from Khánpúr and took up a position at Adnipúr and not more than a distance of two kos remained between the two armies. Mírzá Haidar determined to make a night attack on the enemy. He first of all made his own younger brother Mírzá Abdur Rahmán his heir-apparent and inaugurated him, then getting his men into order he prepared for the night attack. It so happened that the night was very cloudy and when he got to the tent of Khwájah Hájí who was the soul of the rebellion and the agent of the Mírzá, the darkness hid everything. Sháh Nazar a cuirassier of Mírzá Haidar said, "When I shot an arrow the voice of the Mírzá fell on my ear, saying, 'you are at fault.' I then knew that the arrow had accidentally struck the Mírzá." It is also said that a butcher shot him in the thigh with an arrow. In another tradition it is stated that Kamál Kúka killed him with a sword. But except an arrow-wound in his heart no other thing was visible. In reality this is the sum of the traditions. When morning

dawned it became noised abroad amongst the Kash míris that a Mughal was lying slain in their camp. When Khwájah Hájí came to view the corpse, he said it was that of Haidar. He held up the head from the earth but nothing but the last breath remained. He moved his eyes and gave up the ghost. After this the Mughals fled to Indarkot and the Kashmíris buried the corpse of Haidar and then pursued the Mughals. They took refuge in Indarkot and for three days defended themselves. On the fourth day Muhammad Rúmí loaded the cannon with copper coins and fired them on the enemy. Every one who was struck with them died. At last, however, Khánmai, the widow of Mírzá Haidar, and her sister Khánjí spoke to the Mughals and said, "Inasmuch as Mírzá Haidar has departed from our midst, it would be better to make peace with the Kashmíris." The Mughals agreed to this and sent Amír Khán, builder, to the Kashmíris to ask for peace. The Kashmíris were pleased at this and wrote a letter with oath and covenant that they would not persecute the Mughals any more. The government of Haidar Turk lasted for ten years.

Názuk Sháh. 3rd Time.—When the doors of the fort were opened, the Kashmíris went into the treasury of Mírzá Haidar and plundered it, taking away the beautiful and delicate garments it contained. The family of the Mírzá was taken to Srinagar and placed in the hands of Manújá. The Kashmírí chiefs then divided Kashmír between themselves. Daulat Chakk got the pargannah of Deosar, Ghází Khán the pargannah of Wáhí; Yúsuf Chakk and Bahrám Chakk obtained Kamráj. Khwájah Hájí the wakíl of the Mírzá took a lákh of shawls and the whole of the nobles of Kashmír, but especially Ídí Zínú, took the government of the province into their hands. Názuk Sháh as a kind of shadow of a king was upheld in name. In truth Ídí Zínú was king. (coin No. 10, pl. I. I attribute to this period. It is struck in the name of *Nádir* Sháh. The reverse bears the date 957 A. H. and was probably struck from an old die of Haidar's, see Nos. 13 and 14 which were struck by Haidar in the name of Humáyún. The only sign I can find of Haidar on the coins is the solitary ح I have before mentioned on coin No. 33, pl. III.)

In 959 A. H. Sankar Chakk son of Gájí Chakk who was without any estates, while Ghází Chakk who called himself the son of Gájí had many, desired to leave Kashmír. The whole story is this, Sankar Chakk was without any doubt or question the son of Gájí Chakk. Ghází Khán Chakk, although he was called the son of Gájí, in reality was not his son. For Gájí after the death of his own brother Hasan Chakk took to wife the widow who was then with child. Two months after Ghází Khán Chakk was born. Hence Sankar Chakk wished to leave Kashmír (*i. e.*, I

suppose the city of Kashmír or Srínagar) and repair to Ídí Zíná. When this got wind, Daulat Chakk and Ghází Khán Chakk sent Ismá'íl Hánit and Harjú with 100 men to call back Sankar Chakk, telling them to bring him by force if he would not come otherwise. He would not come, but fled to Ídí Zíná. In the end Sankar Chakk had given to him the jágírs of Kothár, Kháwin and Madurú and was thus satisfied, and so the disturbance was quelled.

In those days there were four parties in Kashmír (1) Ídí Zíná and his party, (2) Hasan Mákarí son of Abdál Mákarí and his party, (3) the Kapúrís who were composed of Bahrám Chakk, Yusuf Chakk and others, (4) the Kásís who were Gáji Chakk, Daulat Chakk and Ghází Khán Chakk. In order to strengthen the Chakk interest, the following marriages took place:—The daughter of Yahí Zíná married Husain Khán son of Gáji Chakk; the daughter of Daulat Chakk married Muhammad Mákarí son of Abdál Mákarí; and the sister of Yúsuf Chakk son of Zangi Chakk married Ghází Khán Chakk. Being thus united for a short time the usual result followed, they quarrelled and separated. Ghází Khán Chakk went to Kamráj, Daulat Chakk to Súrpúr, the Mákarí faction to Pákul. By reason of this quarrel Ídí Zíná remained in a state of grief in Srínagar. When the egg-plant came in season Ídí Zíná ordered fowl to be cooked with the fruit: this kind of food is delicious and the Kashmíris like it. Afterwards when Bahrám Chakk and Sayyid Ibráhim and Sayyid Yaqúb accepted his invitation to dine off the above-mentioned viands (but Yúsuf Chakk would not accept the invitation), Ídí Zíná seized the three and put them in prison. Yúsuf getting to hear of this fled to Daulat Chakk at Kamráj, taking with him 3,000 horsemen and 700 infantry. When Ídí Zíná saw that the Kashmíris were going over to the Chakk faction, he set free from prison the Mughals Mírzá Qarrá Bahádur, Mírzá Abdur Rahmán, Mírzá Ján Mírak, Mírzá Yakla, Mír Sháh, Shahzáda Beg Mírzá, Muhammad Nazír and Jar 'Alí, and supplied them with horses and armour and pay and took up a position at Chakkpúr. Meanwhile the Sayyids Ibráhim and Yaqúb, by the help of their troopers, escaped from prison and joined Ghází Chakk at Kamráj. Bahrám Chakk was not able to escape. The next day Ghází Khán Chakk came to Srínagar with 30 cavalry and kept up a constant fight with Ídí Zíná from the Ídgáh where he had taken up his position. Ídí Zíná sent the Mughals against him. He, however, destroyed all the bridges and the Mughals did nothing. Meanwhile Daulat Chakk came to help Ghází Khán. At last Bábá Khalíl went to Ídí Zíná and said, "You trust the Mughals and drive the Kashmíris from your sight. This is not expedient." Accordingly Ídí Zíná made peace with the Kashmíris and dismissed the Mughals and their families. Khánjí, the sister of Mírzá

Haidar went by the way of Paglí to Kábul and the families of Jar 'Alí and others were put to the sword. Khánam fled to Káshgar. After this news came that Haibat Khán and Sayyid Khán and Shahbáz Khán Affghans of the Niyází tribe were invading Kashmír and that they had arrived at the salt range in the pargannah of Bánihál. Ídí Zíná Husain Mákarí, Bahrám Chakk, Daulat Chakk and Yúsuf Chakk, joining their forces together, opposed the Níyázís. The two parties fought well, Bibí Rába, the wife of Haibat Khán Níyází joining the fight and striking 'Alí Chakk with her sword. At last, however, she and the three Níyází leaders were slain and the Kashmírí allies returned to Srínagar flushed with victory. They sent the head of the Affgháns to Islám Sháh Súrí by the hands of a man named Yaqúb. After this of course the allies disagreed. Ídí Zíná took up his residence in Khágarh together with Fath Chakk, Lauhar Mákarí, Yúsuf Chakk, Bahrám Chakk and Ibráhím Chakk. Daulat Chakk, Ghází Khán Chakk, Husain Mákarí and Sayyid Ibráhím joining themselves together settled in the Ídgáh. Two months passed thus. Then Yúsuf Chakk, Fath Chakk and Ibráhím Chakk left Ídí Zíná and joined Daulat Chakk, who finding himself thus supported attacked Ídí Zíná who not being able to oppose him fled, without trying the chance of a battle, to Merv. Wishing to change horses, by accident a horse kicked him in the breast and at Simále he disappeared altogether, *i. e.*, he died in that place and his corpse was brought to Srínagar and buried in the village of Músá Zíná. The nobles then deposed Názuk Sháh who was king only in name, and began to govern the country on their own account. Názuk Sháh, this third time, reigned ten months.

Ibráhím Sháh II.—Ibráhím II* was the son of Názuk Sháh. As Ídí Zíná had departed this life, Daulat Chakk came into the capital and took upon himself the affairs of the kingdom. Inasmuch as he deemed it expedient to have some one king in name he set up Ibráhím Sháh that he might rule nominally under him. At this time Khwájah Háji the wakíl of Mírzá Haidar left Khaigal and took refuge with Islám Sháh. At the same time Shams Zíná and Bahrám Chakk were thrown into prison. At the 'Íd-i Fitr, Daulat Chakk went to practice archery outside the city. Yúsuf Chakk was also there and riding on his horse. A foot-soldier who was gathering arrows got entangled in the horse's legs and Yúsuf was thrown from his horse and his neck was broken.

In 960 A. H. Daulat Chakk and Ghází Khán Chakk again disagreed and the whole of Kashmír was involved in the quarrel. Husain Mákarí and Shams Zíná who were in Hindustán in 961 returned and joined themselves to Ghází Khán Chakk. Bahrám Chakk and the sons

* Coin No. 16, pl. II may be of this Ibráhím. All the coins with name Ibráhím on them seem to possess the date 842 in Arabic words.

of Yúsuf Chakk joined themselves to Daulat Chakk. These dissensions and quarrels lasted two months. At last a husbandman assuming the garb of an ambassador came to Daulat Chakk and said, "Ghází Khán Chakk has sent me to ask why you keep all these men near you for they are all your enemies." To Ghází Khán Chakk he said, "Daulat Chakk is willing to accept peace why still stir up strife?" This trick succeeded and produced peace. Shams Zíná again fled to India.

During these times the inhabitants of Great Tibet made an incursion into Kashmír and drove away the flocks of sheep of the pargannah of Kháwan and Bára which were in the estates of Habíb Chakk the brother of Nasrat Khán Chakk. On account of this Daulat Chakk, Sankar Chakk, Ibráhím Chakk, and Haidar Chakk the son of Ghází Khán Chakk and other nobles together with an army were sent by the way of Lár to Great Tibet. Habíb Khán Chakk who was with the army, going by the way the sheep had been driven, used such expedition that he fell suddenly on the fort of Great Tibet and took it killing the governor. The garrison all fled. Habíb Chakk told his brother Darvesh Chakk to scour the country but he neglected to do this. Habíb, however, in spite of unhealed wounds, mounting his horse, took palaces and forts and the inhabitants of Great Tibet, not being able to withstand him, submitted. In one of the palaces forty persons were taken on the roof. Much importunity was used to preserve their lives. 500 horses, 1,000 pieces of pattú, 50 yaks, 200 sheep and 200 tolahs of gold were offered in their stead, but Habíb Khán would not give ear to their words: he slew the whole of the forty. Riding away from that fort he went to another which suffered the same fate. The inhabitants of Great Tibet then sent him for his acceptance 3,000 horses, 500 pieces of pattú, 200 sheep and 30 yaks. He also took from the Tibetans some five Káshgarí horses which had fallen into their hands. Haidar Chakk, son of Ghází Khán Chakk sent Khání his foster-brother to Habíb and told him that as the Tibetans were minding these Káshgarí horses for his father Ghází Khán, it was necessary that the horses should be sent to him in order that he might forward them to his father. Habíb Chakk sent nearly 200 men with the horses in order that they might quarrel among themselves in the way, but they would not do so, and at last they arrived in Srínagar with their charge.

In the year 962 a great earthquake committed much ravages in Kashmír. Many towns and villages were destroyed. Nílú and 'Adampúr were washed away by the river Jhelum. In the town of Máwur which is situated at the foot of the mountains there was a great landslip which killed nearly 600 persons.

Ismáil Sháh.—When five months had passed of the reign of Ibrá-

hím Sháh, who was in truth the agent of Daulat Chakk, Ghází Khán Chakk took the affairs of the kingdom into his hands and Daulat Chakk was defeated and blinded. (I cannot tell which are the coins of Ibráhím Sháh I, and which of Ibráhím Sháh II. They are all like No. 16, pl. II, the date is 842 in Arabic words.) Ghází Khán set up Ismáel Sháh on the throne in 963 A. H. (For coin of Ismáil see No. 17, pl. II. Date 842 in Arabic words.) In that year Habíb Khán Chakk desired to join himself to Daulat Chakk and with his intention went towards Mardádún. Ghází Khán Chakk then said to Nasrat Chakk brother of Habíb, it would be as well for us to seize Daulat Chakk before your brother comes, for afterwards it will be difficult to do so. Once upon a time Daulat Chakk going on board a boat, went to a pond in the lake that he might kill water-fowl. Ghází Khán coming after him took his horses, and when he fled to the mountains pursued him and taking him prisoner blinded him. After this Habíb Khán Chakk came and Ghází Khán who was not pleased with him gave Názuk Chakk the nephew of Daulat Chakk much inconvenience and trouble. He was not at all at ease about the blinding of his uncle and for that reason Ghází Khán Chakk wished to imprison him, but Názuk, getting news of this fled to Habíb Khán Chakk. (For coin of Ismáil Sháh, see No. 17, pl. II.)

Habíb Sháh son of Ismáil Sháh.—After Ismáil Sháh had reigned two years he died. Ghází Khán elevated his son to the throne. Towards the end of 964 A. H. Nasrat Khán Chakk, Názuk Chakk, Sankar Chakk, brother of Ghází Khán Chakk, Yúsuf Chakk and Hastí Khán Chakk met together and took an oath and covenant to this effect that as Ghází Khán Chakk was eaten up by physic, and his brother Husain Chakk is in prison, we will release *him* and slay Ghází Khán. Ghází got to hear of all this. Appeasing Yúsuf and Sankar Chakk he called them into his presence. Habíb Khán Chakk, Nasrat Khán Chakk, and Darvesh Khán Chakk said they would like lawyers and learned men to plead for them, and then come or flee as it pleased them. Nasrat Chakk came without any promise being given him and was at once imprisoned. Habíb Chakk and Názuk Chakk destroyed the bridges and departed. Hastí Khán Chakk with all his followers joined them. Ghází Khán sent a large army against them and a great battle resulted. His army was beaten and several were taken prisoners. Habíb Khán being victorious departed to the mountains of Mámún. After the defeat his army had sustained, Ghází Chakk took the field himself in order that he might defeat Habíb; and he went to Badúmara. Thence by water with 3 elephants and 3,000 men he went to the plain Khálidgarh. Habíb Khán here opposed him with twenty men, but after a hard fight he was compelled to flee. At the bridge of the Jamja his horse stuck fast. Mean-

while an elephant driver of Ghází Khán Chakk came up and took him prisoner. Ghází Khán Chakk told him to take off his head. He tried to do so, but Habíb got the man's hand in his mouth and held it in his teeth. At last, however, he managed to sever his head from his body, and he carried it to Kala, the name of his residence and hung it there on the door. Darvesh Chakk and Náznk Chakk also fell into their hands and were treated similarly. After this Bahrám Chakk returned from India and the jágír of Khuba Hámún was given to him. Getting permission he left Srínagar and went to his birthplace Dancha in the pargannah of Zaingarh. Sankar Chakk, Fath Chakk and others soon joined him and going to Súbapúr they raised the standard of rebellion. Ghází Khán Chakk sent his sons and brothers against them. They were not able to oppose them and fled to the mountains. Ghazí Khán sent his party after them and ordered them to pursue until they captured. The next day news came that Bahrám Chakk had escaped from Sarkob, and that Sankar Chakk and Fath Chakk had left him. Ghází Khán himself pursued them to Khoba Hámún and for six days searched everywhere for Bahrám Chakk, but he was not taken. However Ahmad Jozín brother of Haidar Chakk son of Ghází Khán Chakk agreed to pursue Bahrám until he took him, so Ghází Khán returned to the city. Ahmad Jozín went to Sarkob the residence of the Ríshís or Sufís and arrested them and made enquiries about Bahrám. The Ríshís said they had placed him in a boat and conveyed him to the residence of Amír Zíná in Bádelí. The Ríshís are a people who are engaged at all times in agriculture and tree planting. When Ahmad Jozín came to Amír Zíná after much search he succeeded in arresting Bahrám Chakk whom he took to Srínagar where the people killed him and Ahmad Jozín was elated with his success. In those days Sháh Abulmuálí who had fled from Lahore, and had been imprisoned by the Ghakkars managed to escape with the fetters still on his feet. Making friends with Kamál Khán Ghakkar, he, after the fashion of Mírzá Haidar, desired to invade Kashmír. When he arrived in Bájáorí a company of Mughals met him. The blinded Daulat Chakk, Fath Chakk and others of the Chakk faction and Lauhar Vángarí all joined Sháh Abulmuálí and in 965 A. H. he set out for Kashmír. When he arrived at Bárámúlla Haidar Chakk and Fath Chakk who were guarding the pass fled and went to Bádúkhí. The Sháh proceeding justly, would not allow any of his soldiers to oppress the people. Ghází Khán Chakk making his brother Husain Chakk leader of the van, himself took up a position at Khanúd. The Kashmíris who were with Sháh Abulmuálí left him without leave and attacked Husain Chakk and caused him to flee. Ghází Khán Chakk went to his assistance and fighting bravely many Kashmíris were slain by him and the battle

turned in his favour. Sháh Abulmuálí seeing this state of things fled without further resistance. In his flight his horse became very tired, but a Mughal whom he came across gave him a fresh one and took the tired one and stood with it on the road. When the Kashmiris who were pursuing Abulmuálí came up to the place he held them all at bay for some time until, his quiver becoming empty, they rushed upon him in a mass and slew him. During the delay Abulmuálí escaped. Ghází Khán returning arrived in Bádúkhí and every Mughal whom they brought to him he beheaded. But the Háfiz Mírzá Husainí who was from the singers of Humáyún he did not slay on account of his good singing. After this Nasrat Khán Chakk was liberated from prison, and sent into the service of Jalál-ud-Dín Akbar, where becoming acquainted with Bairám Khán he tried to ingratiate himself in his favour.

In 966 A. H. a change came over the disposition of Ghází Khán Chakk and resulted in much oppression and violence to the people who all became opposed to him. He by chance heard that his son Haidar Chakk wished to take the kingdom of Kashmír from him. So he called his wakíl Muhammad Janíd and Bahádur Bihat and sent them to admonish his son and advise him to put such imaginations out of his head. They went to him and petitioned him. But Haidar Chakk snatched a dagger out of Muhammad Janíd's girdle and buried it in his stomach. People flocked in and arrested Haidar and took him to his father who ordered him to be executed and his body to be suspended on a door in Zínágarh. All who joined him also were executed.

In 967 A. H. Mírzá Qarrá Bahádur came from India with a large army and nine elephants. For three months he stayed in Lálpúr. From the Kashmiris Nasrat Chakh, Fath Chakk and others, and from the Ghakkars also a large body joined him. He evidently hoped that a lot of Kashmiris would join him. But meanwhile the leaders who had come in deserted him and went over to Ghází Khán. By reason of this desertion there was much indecision in the invading army. Ghází Khán coming from Kashmír arrived in Naurozkot and sent his infantry against the invaders and defeated them. Mírzá Qarrá fled to the fort of Daira. The next day he again fled before the attack of infantry and his elephants fell into the enemy's hands while five hundred Mughals were killed.

Five years had passed of the reign of Habíb Sháh when Ghází Khán Chakk determined to put him on one side and unfold the royal banners in his own behalf. Ceasing to act therefore in the name of another, he ordered the Khutba to be read and coins to be struck in his own name, taking the title of Ghází Sháh.

(I have never seen a coin of any metal with Habíb's name on it. None of my numismatic friends have one. And yet he reigned five

years. I am inclined to think that the coin with the name of *Mahmúd* on it was struck by him. I read the date on this coin as 961 A. H. See fig. 18, pl. II. The unit word and figure are both almost gone. The reverse of No. 28, pl. I, is, however, precisely similar and gives 961 undoubtedly which is two years before the accession of Akbar. No wonder the Rev. J. Loewenthal said, "There is, however, great confusion in all the dates of Kashmírían History," p. 280, I. A. B. S. 1864. Naráyan Kol states that Habíb Khán became king of Kashmír in 960. In 961 he committed great mistakes in the administration of justice, so that the pillars of State became ashamed of him. Hence 'Alí Khán put the crown on the head of Ghází Khán his brother. This was the beginning of the Chakk dynasty. 'Azam puts the beginning of the Chakk dynasty in 962 A. H. He calls Habíb son of Ismáíl Sháh while Naráyan Kol gives Shams-ud-Dín (Ismáíl's brother) as the name of his father. If Naráyan Kol be correct then the coin of Mahmúd may be assigned to Habíb. It is not uncommon for a king to rule in one name and for his coins to bear another. The Islám Sháh of the coins is the *Salím Sháh* of history. There is, according to Lieutenant Newall, an inscription of Habíb's in Kashmír dated 981 A. H. I. A. B. S. 1864. But Newall himself makes Habíb die in 1557 A. D. = 965 A. H. By the way he calls Nádir Sháh Tarkh Sháh. For my text I am indebted to Farishtah and I have followed him. Naráyan Kol cannot be right as to the length of Habíb's reign. For as we have seen Akbar was reigning in India and he ascended the throne in 963 A. H. When authorities are so conflicting and coins cannot be trusted, it is hard to come to a decision as to what is correct.)

Ghází Sháh.—Ghází Sháh by reason of leprosy had lost his voice, his fingers were nearly dropping off and his teeth were much decayed. In 968 A. H. Fath Chakk, Lauhar Vánkarí and other Kashmíris coming under the suspicion of Ghází Sháh betook themselves to the mountains. Husain Chakk brother of Ghází Sháh was sent with 2,000 men to pursue them. As it was winter the rebels perished: some few who escaped fled to Khatwár, but becoming uneasy there, they sought refuge with Husain Chakk who entreated forgiveness for them from Gházi Sháh, who not only forgave them but bestowed lands on them. In 970 Ghází Sháh, leaving Kashmír went to Lár. Thence he sent Fath Khán Chakk, Násir Kibatu and his own son Ahmad Khán together with some nobles to invade Great Tibet. When they got within five koss of Tibet Kalán, Fath Khán Chakk, without obtaining permission from Ahmad Khán left the army and went into the city. Inasmuch as the Tibetans did not desire war, they were ready to make great presents to him, and he quickly came out from the midst of them. Ahmad Khán seeing

this said to himself, that inasmuch as Fath Khán has entered Tibet and returned, why should I not do the same? All Kashmír would praise me. He therefore determined to go alone. Fath Chakk remonstrated with him, and told him that if he were determined to go he ought not to go alone. He would not listen to him, and went accompanied but by 500 men. Fath Khán retired. The Tibetans seeing Ahmad coming alone, attacked him and he not being able to withstand them, fled to Fath Khán and ordered him to the rear-guard of the army for the day while he pressed forward without delay. The Tibetans still pressed on, and when they found Fath Khán alone, engaged him in battle. He, fighting with all zeal and alone, was slain. Ghází Sháh hearing this news was exceedingly angry, and turned away his face from his son as was meet after such conduct. The reign of Ghází Sháh was cut short after four years.*

Sultán Husain Sháh.—The "Táríkh-i-Kashmír" says Husain Sháh, ascended the throne in 971 A. H. Two coins Nos. 20 and 21, pl. II, give 970. I prefer the testimony of these coins to that of the historians. The date is duplicated, it is given once in Persian words and once in figures and both dates agree.

Husain Sháh was the brother of Ghází Sháh. In 971 A. H. Ghází Sháh invaded Great Tibet and took up a position at Muladghar. On account of his being a victim of leprosy he lost his eyesight. He made it a habit to oppress his subjects and from innocent people exacted heavy fines. By reason of this his subjects were estranged from him and formed themselves into two companies against him. One faction followed Ahmad Khán his son, and the other his brother Husain Chakk. When Ghází Sháh heard of this he returned from his expedition to Tibet and re-entered Srínagar, and as he showed greater friendship to Husain Chakk he placed him on the throne instead himself, and the whole of the nobles and ministers came to the house of Husain and gave in their firm allegiance to him. After 15 days Ghází Sháh divided the whole of his robes and goods into two parts, one part he gave to his own sons, the other to shopkeepers telling them to give him their value. The shopkeepers at once resorted to Husain to ask for justice. Husain advised Ghází Sháh to desist from making his demand. On this Ghází wished that he had made his own son his successor. Husain hearing this summoned Ahmad Khán, Ghází's son and Abdál Khán and others of the family to his presence, and made them take an oath and give their word to obey him. Ghází Sháh being ashamed at this attempt to subvert the

* For coin of Ghází Sháh see No. 18, pl. II. Dr. Stulpnagel has I believe the only duplicate known. Mine from which I drew No. 19 is now in the British Museum.

king called round him a party of Mughals and formed a faction of his own. Husain remained firm and opposed him. The headmen of the city and towns intervened and extinguished the flame of rebellion. Ghází Sháh, leaving the city, took up his abode at Rahínpúr and after three months again came into Srínagar. Husain Sháh being firm in his government divided Kashmír into portions. In 972* he sent his eldest brother Sankar Chakk to Rájáorí and Naushahra which he gave him in jágír. But after this he heard that Sankar had rebelled. For this reason he gave the j gír to Muhammad Mákarí and sent an army under Ahmad Khán and Fath Khán Chakk, Khwájah Masaúd and Mának Chakk against Sankar and they gradually became victorious. Husain Khán went out to meet them and brought them to Srínagar, but after awhile it came to his knowledge that Ahmad Khán and Muhammad Khán Mákarí and Nasrat Khán Chakk had determined to assassinate him. He therefore wished to arrest them. They, getting to know of this, came in a body before Husain, who knowing they were acquainted with his purpose sent Lodní Lond to them, that he might get them all in one place and make each person take an oath that he would have enmity with no second person. The Malik did his business well and made them all inclined towards peace, and they all came into the house of Ahmad Khán and inasmuch as this last named gentleman had not seen Husain Sháh for some time they determined to carry him into the king's presence. Ahmad Khán with much flattery consented and together with Nasrat Khán Chakk and Malik Lodní Lond they went to the palace of Husain. The Qází Hábíb, who was of a city family and Muhammad Mákarí being present, the assembly was held. When evening came Husain told them he was going to have a game and that they might withdraw to the upper room and enjoy themselves and he would shortly join them. When they had gone to the upper room he ordered some persons to imprison them. After this he sent 'Alí Khán and Khán-i-Zamán whose real name was Fath Khán against Sankar Chakk with a large army to Rájáorí. They defeated him and returned victorious. Khán-i-Zamán, getting all power into his hands, ordered all the nobles every day to put in an appearance at his house. In the year 973 A. H. people calumniated the Khán before Husain Chakk so that he commanded that no one should visit him. The Khán was making preparations for leaving Kashmír when Husain Mákarí coming to him asked him, "Why do you leave the country? Husain Sháh has left his palace to go hunting. You can now seize the whole of his goods and treasures." These words pleased the Khán and with the aid of Fath Chakk, Lauhar Vánkarí and the like of them he went to the palace of Husain

* Coin No. 22 is dated 972 A. H.

Sháh and set fire to the doors and tried to deliver Muhammad Mákarí, and Ahmad Khán and Nasrat Khan from prison. At that time Masaúd Mának, who was superintendent of the prison, threw water into the hall of the palace until it became mud. Daulat Khán, a follower of the Chakks, putting on his quiver stood ready. Bahádur Khán, the son of Khán-i-Zamán rushed upon him and struck at him with his sword, but it alighted on his quiver. Daulat Khán let fly an arrow which struck the horse of Bahádur in the eyes and caused it to rear so that Bahádur was unhorsed. Musaúd Mának at once cut off his head and Khán-i-Zamán who was standing outside fled. Masaúd Mának pursued him and took him prisoner and led him into the presence of Husain Sháh. The king commanded that they should take him to Zínágarh, and there cut out off his ears and nose and hands and feet and hang the body on a door. Calling Masaúd Mának his son, he gave him the title of Mubáriz Khán, and with it the jágír of Bálkul.

In the year 974 A. H. Husain Sháh gave orders that Ahmad Khán son of Ghází Sháh, Nasrat Khán Chakk and Muhammad Khán Mákarí should all be blinded. Ghází Sháh made every exertion to get this order reversed, and as he was sick he died. Husain Sháh then founded a school and sought the company of the pious and learned. To a party of these he gave Zainpúr as a jágír.

In 975 A. H. Husain Sháh heard from Lodní Lond that Masaúd Mának Mubáriz Khán had spread abroad that "inasmuch as the king has called me his son, he must also give me a portion of his treasure." Husain Sháh was exceedingly troubled on hearing this and went to Masaúd's house, where, seeing many horses in the stable his mind turned altogether against him, and he ordered him to be imprisoned and Lodní Lond was honoured with the offices and position Masaúd had enjoyed. He did not long enjoy his honours for he embezzled 40,000 ass-loads of shawls belonging to government, and was in consequence put in prison and 'Alí Kúka received his post.

In 976 A. H. Qází Habíb, of the Hanífí sect, on a Friday, leaving the Juma Masjid, came to the zíárat in the graveyard of Yáikoh Márán. There, a man of the Shía religion attacked him with a sword and wounded him in the head. Again he struck him and the Qází raising his hand to protect his head had his fingers cut off. Except difference in religion these two had nothing else between them. Malána Kamál, son-in-law of the Qází, was also with him engaged in reading. Yúsuf after wounding the Qází fled and Husain Sháh, who was himself a Shía, when he heard of the affair ordered Yúsuf to be imprisoned and brought before him. A company of lawyers such as Mulla Yúsuf, Mulla Firoz and the like were assembled, and the king asked them to decide accord-

ing to the law in the matter. They said that the killing of such a person by way of punishment was allowable. The Qází said, "I am alive. The killing of such a person is not allowable." At last, however, they stoned Yúsuf. By accident at that time there came to Kashmír some co-religionists of Yúsuf,—Mírzá Muqím, and Mír Yaqúb son of Bábá 'Alí as ambassadors from the court of the Emperor Jalál-ud-Dín Muhammad Akbar. Whey they arrived at Hírapúr Husain Sháh Chakk erected his tents. When he heard that they were near he left his tent and went out to meet them, and then bringing them in took his seat by their side. After this the ambassadors went by boat, accompanied by Husain's son to Kashmír while Husain returned on horseback. The house of Husain Mákarí was appointed for them. After a few days Mírzá Muqím who was a co-religionist of Yúsuf said that as the Qázís have killed Yúsuf, you had better send them to me. They were accordingly sent. Qází Zain, who was of the same religion as Yúsuf, said, that the lawyers had made a mistake in their sentence. The lawyers replied we did not give the sentence of death absolutely, we said that to execute such a person was allowable by way of punishment. Mírzá Muqím treated their answer with contempt and gave the lawyers into the hands of Fath Khán Chakk, who tortured them. Husain Sháh went by boat to Kamráj. Fath Khán Chakk acting on the orders of Mírzá Muqím executed the lawyers, and tying ropes to their heels he ordered their bodies to be dragged up and down the streets and lanes of the city.

Husain Sháh sent his own daughter as a gift by the hands of the ambassadors to Jalál-ud-Dín Muhammad Akbar, and in that way showed his acknowledgment of Akbar's supremacy.

In the year 977 A. H. news arrived in Kashmír that Akbar had put to death Mírzá Muqím as a recompense for his causing the death of innocent persons in Kashmír. The daughter of Husain Sháh was returned being rejected of Akbar. Husain Sháh, hearing this news was seized with a bloody-flux and lived only three or four months afterwards.

'Alí Sháh.—At that time Muhammad Khán and Bihut Yúsuf son of 'Alí Khán Chakk determined to go to 'Alí Khán Chakk who was in Sonpúr. When Yúsuf went to that place others also gradually fled to 'Alí Khán. Husain Sháh sent messengers to 'Alí Khán to know what he had done "thy son has received no injury I send him to you." 'Alí gave answer that "he had done nothing also. People of themselves have fled to me. Although I advise them to return it is of no use." At last 'Alí took the road to Srínagar and waited about 7 koss from the city. Lodní Lond there joined him having fled frem Husain Sháh, who leaving the city had pitched his tents at a distance from it of about a koss at

Jalahájam. That same night he was deserted by Ahmad and Muhammad Mákarí who fled to 'Alí Khán. Then Daulat Chakk who was one of those near to Husain said to him, "Inasmuch as everybody is leaving us, it would be better to send all the royal insignia, about which the quarrel is, to 'Alí Khán Chakk who is your brother and not a stranger." Husain Sháh at once sent the royal umbrella, the yak's tail and all the insignia of royalty to 'Alí Khán, by the hands of Yúsuf, saying, that his only sin was that he was sick. After this 'Alí Khán went to the house of Husain and visited him. Both shed tears. Husain gave up the city into the hands of 'Alí and went to live at Zainpúr, and 'Alí assuming the title of 'Alí Sháh, took upon himself the affairs of the kingdom. After three months Husain died. 'Alí Sháh followed the bier to the grave which was dug near the Hairán Bázár.

In those days a darvesh named Sháh 'Árif arrived in Kashmír from Lahore. He gave out that he was descended from Tahmásp king of Persia. He was a Shía and was dressed in the garb of a faqír: he was a Súfí also. He had left Husain Qulí Khán Turkmán the governor of the Panjáb. 'Alí Sháh who was a Shía considering himself honoured by this visit expressed his pleasure and besought the holy man to marry his own daughter. He also called him the Mahdí of the latter days. 'Alí Chakk, Nauroz Chakk and Ibráhím Chakk son of Ghází Sháh were all so pleased with him that they not only believed on him but actually worshipped him and at last, considering him worthy, determined to make him their king. 'Alí Sháh getting to hear of this was very vexed and proceeded to severe measures. Sháh 'Árif who was famous for his knowledge of alchemy and his power over fairies, saw how the wind was blowing and gave out that he would no longer stay in Kashmír but would depart to Lahore or some other country in a day. After this he lived in seclusion, until people thought he had disappeared miraculously, but after three days it came out that he had given two ashrafís to a boatman to take him to Bárámúlla whence he had fled to the mountains. 'Alí Sháh sent after him and arrested him and gave him over to keepers. When he fled a second time he was again brought from the Sulaimán mountains. This time 'Alí Sháh took from him his daughter and her dowry of 1,000 ashrafís, and had his daughter divorced from him and caused Khwájah Sará also to leave him and put a watch over him, and at last permitted him to depart to Tibet. 'Alí Rái ruler of Tibet who had an affection for the family of the foolish fellow ran to meet him, and regarded his coming as a great boon and left no rite of hospitality unperformed. He wished him to make the country his own, and begged him to accept his beloved and noble daughter as his wife. He stayed there some time and then at the invitation of Akbar, he took his departure to

India. He arrived in Ágra but died shortly afterwards. (It would be interesting to know what the *ashrafis* which are mentioned in this story, were. The only gold coin I have seen of the Sultáns of Kashmír is one of *Yúsuf*. General Cunningham has two gold coins of Máhárája *Harsha*.)

In 979 A. H. 'Alí Chakk, son of Nauroz Chakk, came to 'Alí Sháh and complained that Dúkah had been trespassing on his estates and interrupting his business. "If you do not stop him" said he "I shall rip open the belly of my own horse." 'Alí Sháh understood this to mean a threat against himself. For this reason he grew angry and ordered him to be arrested and taken to Kamráj. He escaped from this place, however, and fled to Husain Quli Khán, governor of the Panjáb, who did not treat him with conventional hospitality, so he left Lahore and returned to Kashmír where he was arrested by 'Alí Sháh and imprisoned. He again after some time escaped and went to Naushahra where 'Alí Sháh sent an army against him which took him prisoner and hurried him away.

In 980 A. H. 'Alí Sháh invaded Khatwár and taking the daughter of the ruler of that place, he returned. At this time Mulla Ishqí and Qází Sadr-ud-Dín came from Akbar on a mission to 'Alí Sháh. 'Alí sent his niece as a wife for the prince Salím, and along with her he sent a quantity of presents. *He also read the khutba and struck coins in the name of that sovereign, i. e., of Akbar.* At this time also Yúsuf the son of 'Alí Sháh on the information of Muhammad Bihut, put to death Ibráhím Khán son of Ghází Khán, without the agreement of his father 'Alí Sháh. Yúsuf together with his informer fled to Bárámúlla. 'Alí Sháh tried to heal the wound. People asked that the sin of Yúsuf might be forgiven, but demanded that Muhammad Bihut, who was the cause of the trouble, should be imprisoned which was accordingly done.

In 982 A. H. 'Alí Sháh invaded Khatwár, which is also called Kishtwár. Taking the daughter of the governor of that place for a wife to his grandchild Yaqúb he made peace and returned to the city.

In 983 A. H. 'Alí Sháh together with his family and court visited Jamálnaggarí. Haidar Khán, son of Muhammad Sháh, of the family of Zain-ul-Ábidín who was in Gujrát when that country was taken by Akbar, and who returned to India along with the Conqueror, now came to Naushahra. His cousin Salím Khán who was in the neighbourhood joined him with a large party. 'Alí Sháh sent a large army under Lauhar Chakk against them. Muhammad Khán Chakk, who was then governing Rájáorí being envious at the appointment of Lauhar Chakk imprisoned him and taking his army went over to Haidar Khán in Naushahra and offered to conquer Kashmír for him if he could send along with him that brave man Islám Khán. Haidar elated with the

prospect, allowed Islám to accompany him. When they arrived at the town of Jakún, Muhammad Khán, leaving Islám Khán with an excuse, went straight to 'Alí Sháh and was received with favour. 'Alí Máharí, Dáúd Guzár and others who had sided with Haidar Khán were put in prison.

In 984 A. H. there was a severe famine in Kashmír and many people died of starvation.

In 985 A. H. 'Alí Sháh went out on the top of the mosque and sought the companionship of learned and pious men. And according to the traditions of the Hadíth on the benefits of repentance, he repented and bathed. He spent his time in prayers and in reading the Qurán. In his hours of leisure he would mount his horse and engage in polo on the plain. One day as he was on the plain of the ídgáh playing at this game, the pommel of his saddle entered his stomach and he was killed. (For coins of 'Alí Sháh, see Nos. 23, 24, 25, pl. II. One is undoubtedly 987 A. H., and yet the history makes him die in 985. I have one coin of Husain Sháh with date 986 A. H. This is of course quite wrong. For all this I think the coins of 'Alí Sháh are right and the histories wrong. No. 27, pl. II is of Akbar's and is dated 987 A. H. just the same as No. 26 of 'Alí Sháh. This No. 27 I take to be one of the coins struck by 'Alí Sháh in honour of Akbar. There is No. 38, pl. III of the same date 987, and also No. 26, pl. II of Yúsuf Sháh, of the same. We shall have to assign No. 38 to some one.)

Yúsuf Sháh.—When 'Alí Sháh died his brother Abdál Khán Chakk, from fear of his nephew Yúsuf was not present at the mourning, so Yúsuf sent Sayyid Mubáriz Khán and Bábá Khalíl to him with the message that "If you accept me as king, well and good, if not, you had better be king yourself and I will be obedient to you." When they had delivered their message, he said to them, "I am coming and am binding on my girdle, but if any harm happen to me or any hair of mine be injured, the burden be on your own necks." Mubáriz Khán who had evil intentions towards him said, that he would go to Yúsuf Sháh and obtain from him his solemn oath and covenant about this, and with this promise they parted. Mubáriz went to Yúsuf Sháh and told him that Abdál Khán would not come at his invitation, "so it is necessary first of all to cure him and after that to bury 'Alí Sháh." Yúsuf Sháh mounted his horse and went to Abdál, who, opposing him in like manner was slain. Jalál Khán son of Mubáriz Khán was slain in the same encounter. The next day 'Alí Sháh was buried according to the manner of the Shías and Yúsuf Sháh became ruler in his stead.

After two months Mubáriz Khán aided by 'Alí Khán Chakk crossed the river with the intention of rebellion. Muhammad Mákarí, who was

leading the van of Yúsuf's army, together with 60 persons was slain. Yúsuf asking for quarter fled to Hírapúr. Mubáriz hearing this news arranged his army and prepared for war. Yúsuf finding himself unequal to the contest fled to the town of Parthál in the jungle. Mubáriz Khán pursued him; and the two parties coming together, Yúsuf took refuge in the mountains, while Mubáriz returned victorious to Kashmír. He imprisoned 'Alí Khán Chakk son of Nauroz Chakk whom he had summoned to his presence to be near him. Other members of the Chakk faction such as Lauhar Chakk, Haidar Chakk and Hastí Chakk from terror did not come to Mubáriz at first, but after awhile they all came, when Bábá Khalíl and Sayyid Barkhurdár had covenanted with them that no harm should happen to them. After this each of them retired to his own home. On their way they made a covenant that they would recall Yúsúf Sháh and make him their king. At once therefore they sent messengers to Yúsuf, saying, that they acknowledged him as king, and were ashamed of their own pusilanimous conduct. Mubáriz began to tremble and promised to go at once with his sons and slaves to Yúsuf Sháh, and with this intention went out of the city accompanied by 'Alí Khán Chakk son of Nauroz Chakk whom he had kept in prison. Daulat Chakk, who was one of his nobles because he had fled before him, was troubled, freeing 'Alí Khán Chakk, he went to the monastery of Bábá Khalíl alone. Haidar Chakk sent a message to 'Alí Khán Chakk telling him that all this exertion and endeavour was to free him. Yúsuf Chakk son of 'Alí Khán said to his father: "Haidar Chakk is explaining his conduct." 'Alí Khán did not heed this, but joined himself to Haidar Chakk and went with him. Lauhar Chakk* and the like of him were gathered together in one place. When they saw 'Alí Khán they took him and put him in prison. After that they all agreed to elevate Lauhar Chakk to the throne. Meanwhile Yúsuf Sháh having arrived at Kálpúr heard that the Kashmíris had made Lauhar Chakk king. (I propose identifying coin No. 38, pl. III as one of Lauhar Chakk's.) The name on it is neither Lauhar nor Gauhar, but some name ending in ع and ud-Dín. Perhaps the name is بدوع الدین Budúa-ud-Dín [the oustripper of others in religion] it is a new name to Kashmír history no matter what it is. (Of course it is the name or title Lauhar Chakk assumed on ascending the throne.) Going from Lálpúr Yúsuf Sháh went to Záhil and taking all his men with him proceeded by way of Jummú to Sayyid Yúsuf Khán Shahídí who was a great noble of the Emperor Jalál-ud-Dín Muhammad Akbar, to ask for help. This noble resided in Lahore. By the assistance of Rája Mán Singh, Yúsuf arrived in Fathpúr Sikrí and had an interview with the Emperor Akbar who had long desired to take Kashmír,

* Written also in MSS. Gauhar.

and being glad of this opportunity sent Rája Mán Singh and Sayyid Yúsuf Khán Shahídí to Kashmír, and they started from Fathpúr Sikrí in company with Yúsuf Sháh in 987. (This is the date on the coin I read Budúa-ud-Dín or Lauhar Chakk. The next sentence settles the matter I think.) But at this time the kingship of Kashmír was in the hands of Lauhar Chakk. Yúsuf Sháh sent his son Yaqúb before him to wean the people from their own ideas and to sow seeds of dissension in the council of Lauhar Chakk. When Yúsuf arrived in Siálkot he went to Rájáorí and took it and thence to Thatta. At the time Lauhar Chakk sent against him Yúsuf Kashmírí, but the Kashmírí at once joined himself to the king. Yúsuf Sháh being thus helped went by double marches along the most difficult road of Jhúpul to the fort of Sonpúr. Lauhar Chakk along with Haidar Chakk, Shams Chakk and Hastí Chakk marched along the banks of the Jhelum and after a few days a hard battle being fought, victory declared in favour of Yúsuf who then turned his face towards Srínagar. Lauhar Chakk by the intervention of Qází Músá and Muhammad Saádat Bihut, had an interview with Yúsuf Sháh which resulted in his own imprisonment. From amongst the Kashmíris also a goodly number were imprisoned. When Yúsuf Sháh had satisfied himself about the kingship, dividing Kashmír into parts he gave jágíra to Shams Chakk son of Daulat Chakk and to his own son Yaqúb and to Yúsuf Kashmírí, and the rest of the land he let out to tenants in chief. After this, acting on the information of certain people, he put out the eyes of Lauhar Chakk.

In 988 A. H. suspicion having fallen on 'Alí Sher Chakk and Muhammad Saádat Bihut and Shams Chakk they were put in prison. Habíb Khán Chakk fled from fear to the town of Khú and Yúsuf, son of 'Alí Khán Chakk who had been imprisoned by Yúsuf Sháh joined Habíb with his four brothers in that place. Thence, going to Tibet, they obtained help from the Rájah and returned, but arriving on the frontiers of Kashmír they quarrelled amongst themselves and did nothing except separate. The soldiery, however, got hold of Yúsuf and Muhammad Khán and cut off their ears and noses. Habíb Khán hid himself in the city.

In 989 A. H. when Jalál-ud-Dín Akbar was returning from Kábul and had encamped at Jalálábád, Mírzá Táhir a relative of Mírzá Sayyid Khán Shahídí and Muhammad Sálih Áqil were sent to Kashmir as ambassadors. When they arrived at Bárapúla, Yúsuf Sháh ran to meet them, and kissing the orders (of Akbar) and putting them on his head, made obeisance and brought the ambassadors into the city. He then sent his son Haidar Khán and Shaikh Yaqúb Kashmírí with many presents to Akbar with whom they stayed for about a year and then returned.

In this same* year Yúsuf Sháh went to Lár. Shams Chakk fled with his chains out of prison and went to Khatwár and joined Haidar Chakk who was at that place. When Yúsuf got to know of this he went after them with an army. They, disagreeing amongst themselves, fled and Yúsuf Sháh returned victorious to Srínagar.

In the year 990* Shams Chakk and Haidar Chakk came from Khatwár to Kashmír with the intention of waging war with Yúsuf Sháh. But Yúsuf met them and appointing his son Yaqúb to lead the van, victory resulted in his favour and he returned victorious. At the intervention of the Rái of Khatwár, Yúsuf forgave Shams Chakk and presented him with a jágír. Haidar Chakk leaving Khatwár went to Rájah Mán Singh.

In the year 992, Yaqúb the son of Yúsuf Sháh was honoured by a reception at the court of Akbar to whom he had gone to give in his submission and homage. When his Majesty arrived in Lahore from Fathpúr Sikrí Yaqúb wrote to his father Yúsuf Sháh that the Emperor was intending to visit Kashmír. Yúsuf said he would meet him. But just at this time he heard that Hakím 'Ali Gílání had arrived at Thatta on an embassy from Akbar. Yúsuf Sháh at once proceeded to Thatta and put on the robes Akbar had sent as a present. He desired to resort at once to the imperial presence but Bábá Khalíl, Bábá Mahdí and Shams Dadlí agreeing together told him that if he went he would be slain, and his son Yaqúb would transport himself rapidly to Kashmír and get made king. Hearing this, Yúsuf delayed accompanying them, so they returned alone to his Majesty. But when Akbar, who was in earnest about the conquest of Kashmír heard of this device he at once appointed Sháh Rukh Mirzá and Sháh Qulí Khán and Bhagwán Dáss to the invasion of Kashmír. Yúsuf Sháh encamped at Bárámúlla. When the news arrived that the invading army had arrived at Haulbás on the frontiers of Kashmír, he stopped up the way. As it was winter and the time for ice and the road was shut up, offers of peace were made. Yúsuf Sháh putting his son Yaqúb on the throne went himself to Rájah Bhagwán Dáss to negotiate. Agreeing to pay annual tribute he made peace. The nobles of Akbar, however, seized him and carried him into the presence of his Majesty. The Emperor was not pleased with the treaty. And in 995 he sent Muhammad Qásim Mírbahr and other nobles. Yaqúb Sháh who was on the throne of Kashmír opposed their coming. The chiefs of Kashmír who were rebellious and who had not given in their submission to Yaqúb, deserted him at this crisis and went over to Muhammad Qásim. Some, however, raised the standard of rebellion in the city. When Yaqúb found that his party was disturbed by interne-

* Probably this is 990 A. H. and 990 in the next paragraph should be 991.

cine quarrels he left the city, and when the army of Akbar entered it he fled to the mountains. Muhammad Qásim having obtained possession of Srínagar extended his power over the provinces. Yaqúb Sháh collecting again an army opposed him. After many Mughals had been slain, Yaqúb was defeated, but after a short time he collected an army with the intention of taking Srínagar. This time Muhammad Qásim not having power to oppose him fled to the fort of Irak and wrote a petition to Akbar asking for aid. The Emperor making Yúsuf Khán Sháhídí governor of Kashmír recalled Muhammad Qásim. When Yúsuf arrived in Kashmír Yaqúb Sháh raised the siege and fled to the mountains. Yúsuf there pursued him for two years. At length he was taken and being encouraged with hopes of the royal mercy he was sent to the Emperor. He was forgiven and the father and son, *i. e.*, Yúsuf Sháh and Yaqúb Sháh becoming nobles of Akbar's court obtained jágírs in the province of Behár. From this time the history of Kashmír is merged in that of the Emperors of Dehlí and the province remained in their power. Before this for a thousand years Kashmír had never been conquered by any one of the kings of India. (Coins No. 26, pl. II, and No. 34, pl. III, are of Yúsuf Sháh. Nos. 35 and 37 are of Yaqúb Sháh. These latter coins are dated 992 A. H. which agrees with the above account. Coins 27, 28, 29, 30 are of Akbar before he had conquered the province. Coins 40, 41, 42 are Akbar's after the conquest of the country. The two latter ones are full rupees. No. 40 is a dám. Srínagar continued to be a mint town of the Mughal Emperors as well as of the Abdállí and Sikh conquerors.)

The Kings of the Ṣaffárián Dynasty of Nímroz or Sijistán.—

By Major H. G. Raverty.

I have read with some surprise a paper in the Proceedings for April last, p. 75, by Mr. C. J. Rodgers, on some coins from Ḳandahár, wherein he says :—

"In mixed metal there was a great quantity of the coins of a king but little known to history, *Táj-ud-Dín Muhammad Harduſi* or *Harúſi* or *Khardufi*, several of one equally little known, *Harb*, and one coin of *Táj-ud-Dín Nasr bin Bahrám Sháh ;*" and, that, as some of the coins acquired at the same time bore the names of the "mints Nímroz and Herát, I had no hesitation, as the coins came from Kandahár, in assigning them to kings who at some time or other ruled in South and Western Affghanistan."

This is rather an unsafe theory to go upon, as the result shows. He also regards "the present find as one of some importance especially

as the coins reveal altogether a new mint, that of Nímroz." Mr. Rodgers then gives the names of eight kings, which a friend brought to his notice from a work entitled "Tárikh-i-Jadwalia." The names are as follows:—

(1.) Táj-ud-Dín Abul Fazl, son of Táhir.
|
(2.) Shams-ud-Dín Muhammad.
(3.) Taj-ud-Dín Harb, son of Azzul Mulk
|
(4.) Bahrám Sháh, Yamín-ud-Dín.
|
(5.) Nusrat-ud-Dín (6.) Rukn-ud-Dín.
(7.) Shaháb-ud-Dín Muhammad, son of Táj-ud-Dín Harb.
(8.) Táj-ud-Dín."

He adds that he was unable to say anything of the last three until this mention of them was brought to his notice by his friend; then that Minháj-i-Siráj "who uses very strong language indeed about the Mughals," wrote a Tabqa on the Princes of Nímroz. But unfortunately "this Tabqa is not in the abridgement published by the Society to which alone I have access. As the Editor, Major Nassau Lees, says there are but two manuscripts of the works, I am afraid I shall stand but little chance of extending my knowledge." If Mr. Rodgers will refer to the "*Ṭabaḳát-i-Náṣirí*" of Minhaj-ud-Dín-i-Siráj, the whole of which and not "an abridgement," has been translated some years since, he will find that the kings referred to by him are well-known to history, though their names are not all correctly given in the above list. In my "Translation," pp. 183 to 202, will be found not only the *ṭabaḳah* containing the account of the *ten* last kings or rulers of Nimroz or Sijistán,* but also of the preceding eight, and other information respecting this *Ṣaffáríán Dynasty* at pp. 19 to 25, and in several other places. I will here, however, give their names, years of their reigns, and the relationship between them, as the information may be of use to others.

Laiṣ, the head of the Ṣaffár or workers in brass of Sijistán had four sons, Yáḳúb, 'Amrú, 'Alí, and Mu'addil. The first of them who rose to power was—

1. Yáḳúb, who reigned from 251 H. to 265 H.
2. 'Amrú, his brother, from 265 H. to 287 H.

* Sijistán is the Arabic mode of writing Sigizstán, which is the Tájzík, or native mode, of writing the name. Sistán is used occasionally with reference to the country, and the "city of Sistán" with reference to its capital, but that does not mean that there was any city so called; for Zarang was "the chief city and capital of Sigizstán."

3. Ṭáhir, son of Muḥammad, son of 'Amrú, from 287 H. to 293 H.

4. Lais, son of 'Alí, brother of Nos. 1 and 2, from 293 H. to 298 H., some say to 299 H.

5. Mu'addil, brother of the preceding, from 298 H. to 300 H.

6. 'Amrú, son of Ya'ḳúb, son of Muḥammad, son of 'Amrú, No. 2, from 300 H. up to the time he had to surrender his territory to the Sámánís.

7. Aḥmad, by some said to have been the grandson of Ṭáhir, No. 3, but others, that he was the son of Muḥammad, son of Khalaf, son of Abú Jáfar, son of Lais, apparently No. 4, from 309 H. to about 331 H.

8. Khalaf, son of Aḥmad, from about 331 H. to 398 H., who was dethroned by Sulṭán Maḥmúd of Ghaznín in that year; and for a long time Sijistán formed a portion of the Ghaznawí empire. At length, with the support of the Sulṭáns, Alb-Arsalán, and Malik Sháh, between the years 465 H. and 470 H., or thereabouts; for there is no record of the exact date,

9. Ṭáhir, son of Muḥammad, son of Ṭáhir, son of Khalaf (No. 8), obtained the government of his native country, and ruled to 480 H.

10. Malik Táj-ud-Dín, Abú-l-Fatḥ, son of Ṭáhir, according to some (but Abú-l-Faẓl-i Naṣr, son of Ṭáhir, according to others), who was subject to Sulṭán Sanjar succeeded, and ruled to 559 H., having reigned just eighty years, and was above a hundred when he died.

11. Malik-us-Sáís (the Torturer or Cruel), Shams-ud-Dín Muḥammad, son of Táj-ud-Dín, from 559 H. The length of his reign is uncertain, but is said to have extended over a considerable time; and, at length he was put to death through his tyranny.

12. Malik-us-Sa'íd, Táj-ud-Dín-i-Ḥarab, son of Muḥammad, who, by some, is styled Táj-ud-Dín, Ḥasan, son of 'Izz-ul-Mulúk and Táj-ud-Dín-i-Ḥarab, son of 'Izz-ul-Mulk, by others, who must have been the brother of No. 11, as No. 12 is called his nephew. He died at the age of one hundred and twenty in 612 H., after a reign of sixty (fifty ?) years. He was the vassal of the Sulṭán of Ghur.

13. Malik Náṣir-ud-Dín, 'Uṣmán-i-Ḥarab, son of the preceding, but, as he only acted as his father's representative, on account of the latter's great age and total blindness, other chroniclers than Minháj-ud-Dín do not mention him as a separate ruler.

14. Malik-ul-Ghází, Yamín-ud-Daulah wa ud-Dín, Bahrám Sháh son of Táj-ud-Dín, brother of the preceding. He was a vassal of the Khwárazm Shah, and the most illustrious of the later rulers of Sijistán. He reigned from 612 H. to 618 H., when he was assassinated by the Muláḥidahs of the Ḳuhistán.

15. Malik Nuṣrat-ud-Dín [Muḥammad ?], son of the preceding

ruled from 618 H. for a few months, when his elder brother, Rukn-ud-Dín Maḥmúd, who had been kept in confinement by his father for some time, on account of his misconduct and cruel disposition (see p. 198), was set at liberty by the above-mentioned heretics, defeated Nuṣrat-ud-Dín Muḥammad in battle, and assumed the sovereignty over Nímroz or Sijistán.

16. Malik Rukn-ud-Dín Maḥmúd, son of Bahrám Sháh from 618 H. His cruelty and tyranny was such that the people recalled his brother, the Amír, Nusṛat-ud-Dín Muḥammad; and while the brothers were contending, an army of Mughal infidels, suddenly and unexpectedly reached Sijistán, and appeared before the capital, which was taken, its people butchered, the city desolated, and the country depopulated. This is one of the reasons why the author of the Ṭabaḳát-i-Náṣirí "uses very strong language indeed" against the Mughals. In the massacre above referred to the two brothers perished. After the Mughals disappeared from the country, a son of Malik Náṣir-ud-Dín, 'Uṣmán (No. 13), brother of Bahrám Sháh, named Shihán-ud-Dín Maḥmúd, who had been in concealment, came forth, and assumed authority.

17. Malik Shihán-ud-Dín Maḥmúd-i-Ḥaran. He did not acquire much power; for the country was in a state of desolation, and the people few. The Muláḥidah heretics induced Sháh 'Uṣmán, a grandson of Náṣir-ud-Dín, 'Uṣmán (No. 13), to come from Neh and occupy Sijistán. He asked for aid from the Malik of Kírmán the governor on the part of the Khwárazm Sháh, Buráḳ, the chamberlain, a Ḳará Khiṭá-i-Musalmán, the same who afterwards murdered his sovereign, and sent his head to the Mughals, whose feudatory he became; and he was the founder of the Ḳará-Khiṭá-i dynasty of Kirmán. The Khwárazmi forces having arrived from Kirmán and joined 'Uṣmán, Shihán-ud-Dín Maḥmúd was martyred, and his brother, the Amír, 'Alí, the Záhid or Recluse was set up, but his government acquired no stability, and he died. He is not accounted among the rulers of Sijistán or Nímroz; and with these the dynasty of the Ṣaffáriáns terminated.

18. Malik Táj-ud-Dín, Bínál-Tigín, the Khwárazmí. He was the commander of the troops sent from Kirmán, and was of the family of Khwárazm Sháh. He took possession of the territory for himself in 622 H., or the following year. In the year 625 H., an army of Mughals again entered the territory of Nímroz, and invested Táj-ud-Dín Bínál-Tigín, within the fortress of Uk of Sijistán.* He defended it for nineteen months; but one day, in going round the walls, received an arrow from the Mughals in one of his eyes; and, subsequently, by accident, fell from the battlements to the ground, and was taken prisoner.† The

* See "Translation," p. 1120.

† *Ibid*, pp. 1125, 1126.

fortress was captured and all within massacred; and Táj-ud-Dín, Binál Tigín was taken from Sijistán, and put to death by the infidels at the foot of the walls of the fortress of Ṣafed-Koh:* and thus terminated the dynasty of the rulers of Nímroz or Sijistán at the close of the year 628 H.

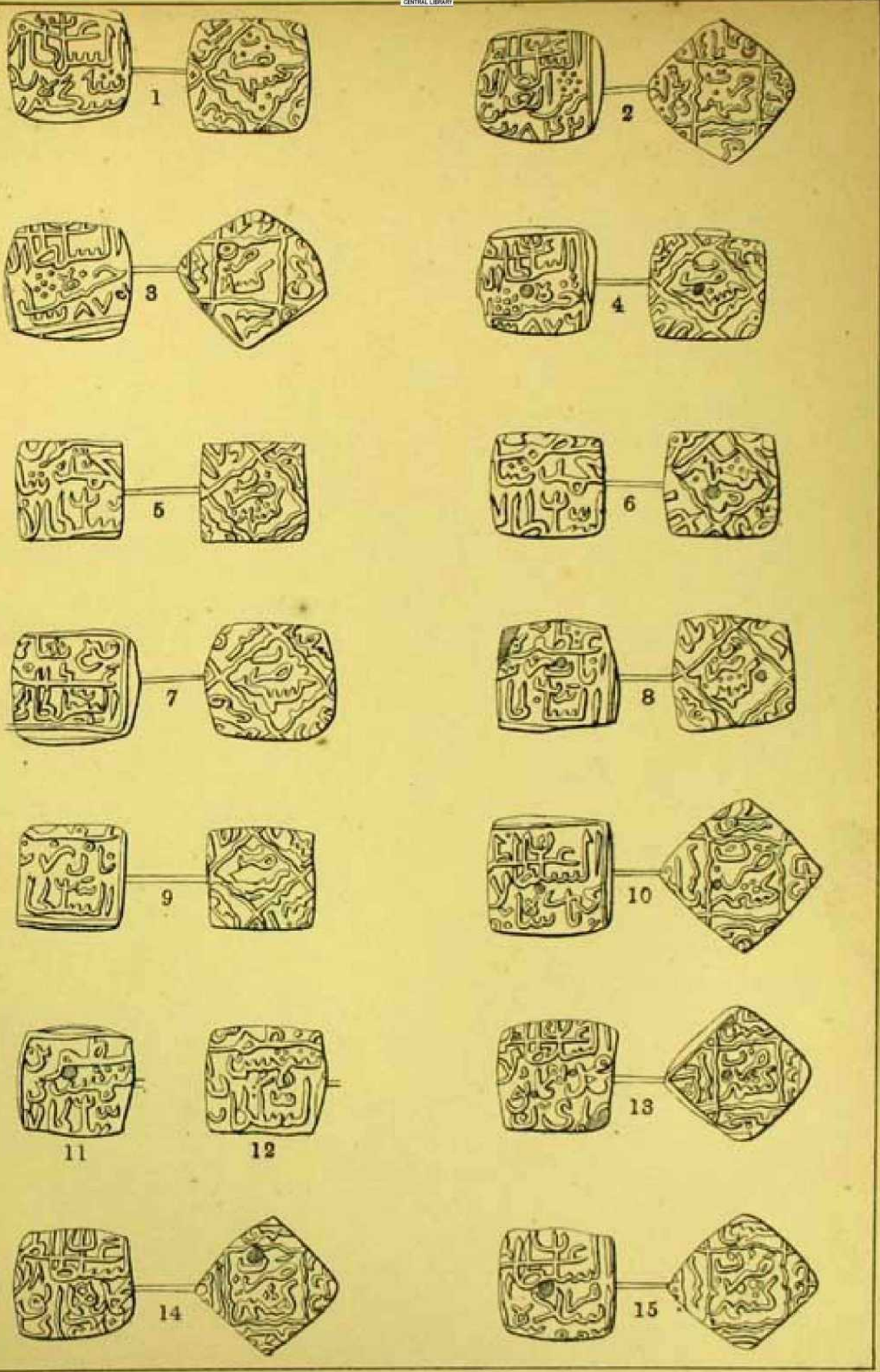
These kings, whose mint was Nímroz or Sijistán, had nothing whatever to do with either Hirát or "West" or "South Affghanistán;" the Mughals or their vassals held Hirát and its territory, as well as Kábul and Ghaznín, and their dependencies; there was no place then known as Ḳandahár, but its territory was known as Bál-yús, or with 'w,' that letter and 'b' being interchangeable, Wál-yús, "Afghánistán," then, as now, does not refer to either Hirát, Kábul, Ghaznín, or Ḳandahár, but to the vast mountain tract surrounded on all sides by the stupendous range of Mihtar Sulaimán or Koh-i-Siyah, and also known under the designation, but in a somewhat extended sense in more recent times, of Roh. There is a great difference between "Afghánistán," and the Afghán State, to which the name Afghánistán has of late years been loosely applied by Europeans only.

Mr. Rodgers appears surprised at "Mangú Khán" the Mughal, putting "the Khalífah's name on his coins." It would be surprising if *he did*, but the Mughals at this period had no coins but the *bálish*, which will be found explained in the translated text. The way it happened that the Khalífah's name appeared is, that the subject Musalmán Princes had to insert the Mughal name somewhere, but they left the other side of the coin as they would have done if a Musalmán was their suzerain, and the Mughals had never existed. This is shown from the coins of the rulers of Kirmán, and of the Ḳarlúgh Turks of Ghaznín and Kaṛmán, and others, who, whether they liked it or not, had to submit to fate, and insert the name of an infidel Mughal on one side of their money.

Mangú Ḳá'án *is said* to have repeated the *kalímah*, but he was no Musalmán; and was buried according to the prescribed rites of the Mughals, and was interred at the side of Chingiz Khán, and of Túlúe or Túlí, his father.† If he had been a Musalmán, how came it about that he despatched his brother, Huláḳú, to destroy and extirpate the 'Abbásís? and overturn the Khiláfat, which he did, and destroyed every male, as he supposed, of the Khalífah's race?

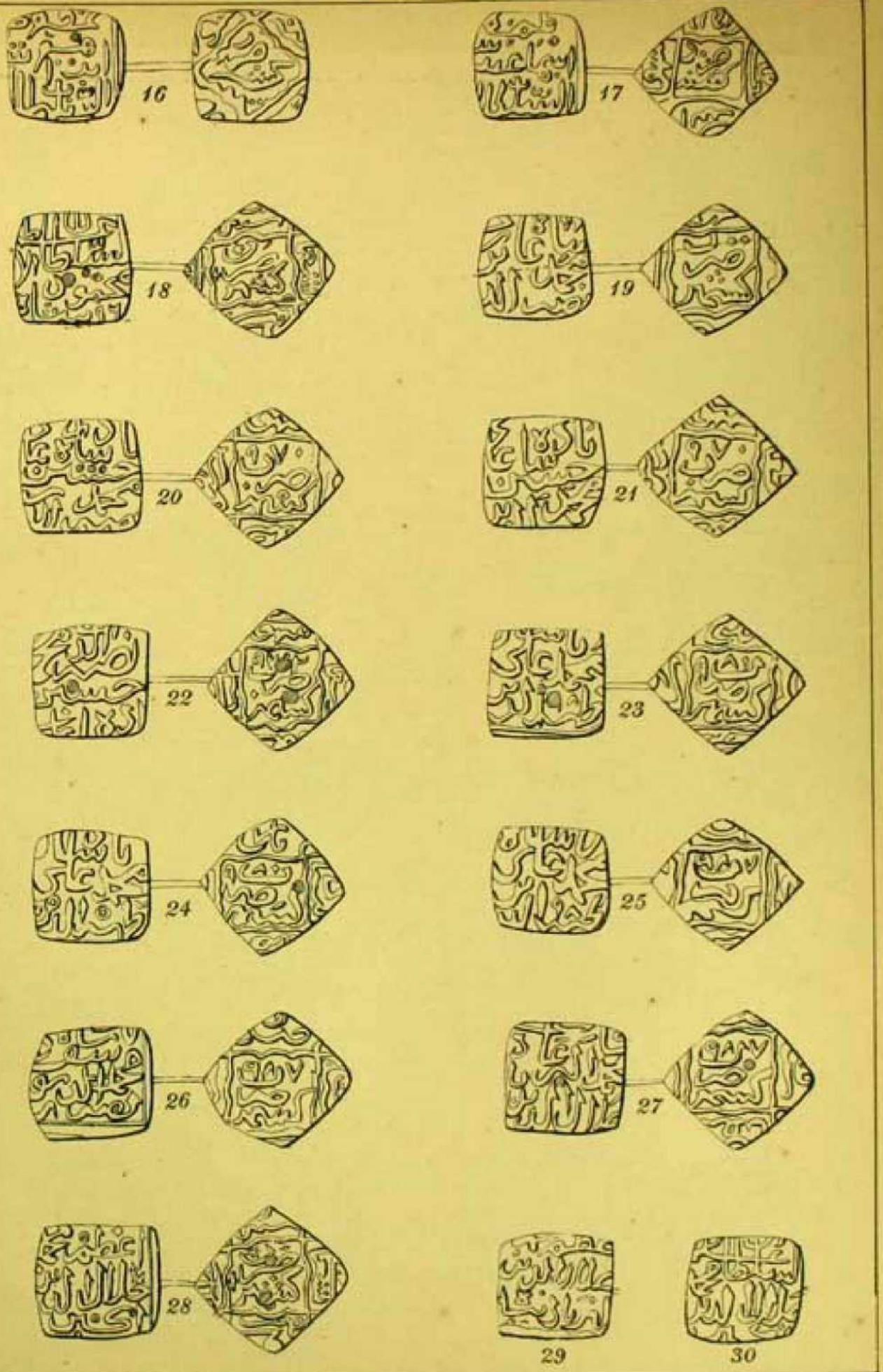
* *Ibid*, pp. 1181, 1197 to 1205.

† *Ibid*, p. 1181, and rule 3, p. 1223, and note to p. 1228, para. 4.



C. J. Rodgers del.

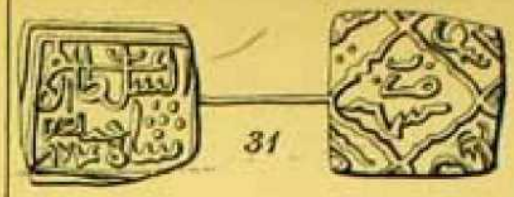
SILVER COINS OF THE SULTĀNS OF KASHMĪR.

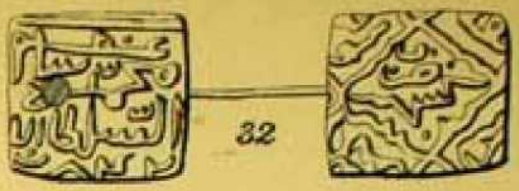


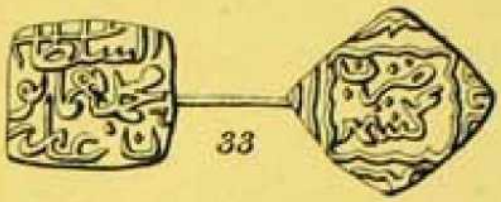
C. J. Rodgers. del.

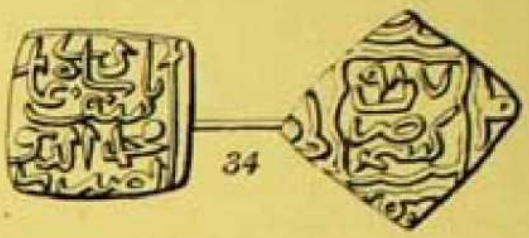
SILVER COINS OF THE SULTĀNS OF KASHMĪR.

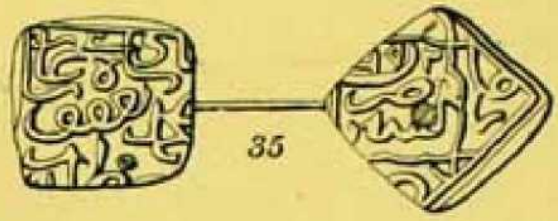
Lithographed at the Survey of India Offices, Calcutta, May 1885.

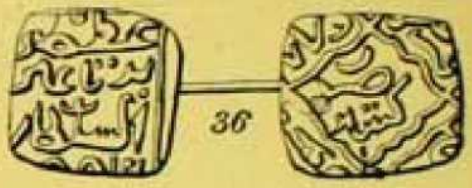


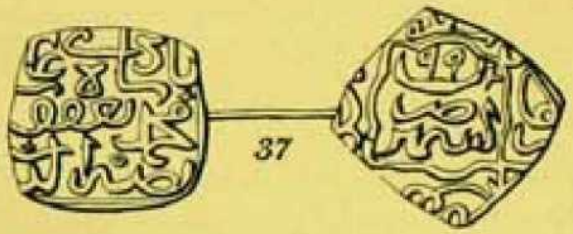


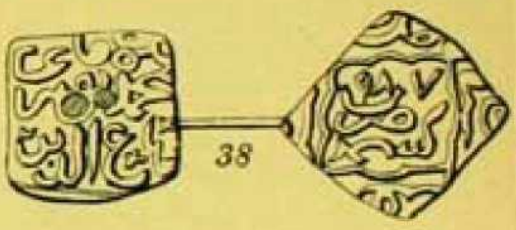


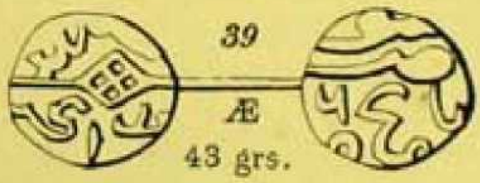


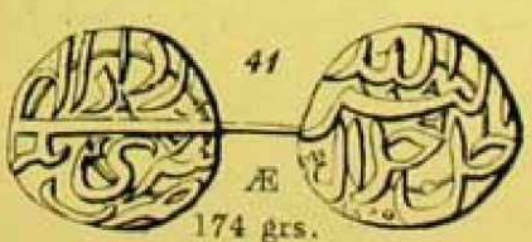


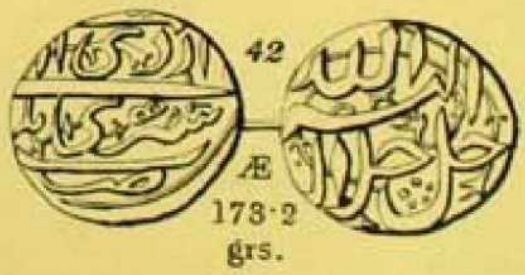












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SILVER COINS OF THE SULTĀNS OF KASHMĪR.

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JOURNAL

OF THE

ASIATIC SOCIETY OF BENGAL.

Part I.—HISTORY, LITERATURE, &c.

Nos. III & IV.—1885.

Notes on the Fatehpur District. N. W. P.—By F. S. Growse, C. I. E.
(With a Plate.)

In order to distinguish it from other places bearing the same name —which is an extremely common one in the N. W. P.—the capital of the Fatehpur District is very frequently designated Fatehpur-Haswa. The latter member of the compound is the name of a small decayed town,* about 7 miles distant, which is now of no importance whatever; but is traditionally represented as the oldest inhabited site in the neighbourhood. Its eponymous founder is said to have been a Rájá Hans-dhvaj, whose two brothers, Mor-dhvaj and Sankh-dhvaj, are also locally commemorated by the names of two adjoining villages, Moráun and Sankháun. The Rájá's second son, Ran-bijay, had the hardihood to capture the horse that had been turned loose by the Pándavs, after their great sacrifice at Hastinapur; and they, taking this as a challenge, at once came down upon him and slew both him and his elder brother, Sivadharna.† On their death, their sister Champávatí inherited the throne. She is said to have re-named the town after herself, Champaka-purí, and dying childless, to have bequeathed it to Bráhmans, whose descendants held it for many generations.

* Gen. Cunningham *sub verbo* in Vol. XVII of the Archæological Survey gives it a population of about 10,000, which is very much over the mark. The return by the last census was 4,197 only.

† This name is doubtful. It is also given as Sudhanwa, or Surat.

However this may be, and, so far as I am aware, there is no authority in the Mahábhárat for the above legend, the town, when it again reappears in local history, is still styled Haswa and its Rájá bears the cognate name of Hans-ráj. After the defeat of Jay Chand, of Kanauj, and his brother Mánik, near Karra (in the Allahabad district near the Fatehpur border) Kutb-ud-dín with his two sister's sons, Kásim and 'Alá-ud-dín, is stated to have advanced against Haswa. Hansráj came out to meet them, and joining in single combat with 'Alá-ud-dín at a village called Chakheri, there lost his life. 'Alá-ud-dín also lost his head, but the headless trunk fought its way on to Haswa, a distance of 12 miles. His *dargáh*, on the top of the old Fort in the centre of the town, is still held in much veneration, and is said to mark the spot where at last he fell and was buried.

At the present day the town of Haswa is almost entirely surrounded by a broad shallow sheet of water. This has been deepened at one end and brought into more regular shape as a tank, in the centre of which is an island, measuring 165 feet square and faced on all four sides with flights of masonry steps. It is approached from the town by a bridge 150 feet long, consisting of 15 arches, of which 7 are open and 8 closed. Its construction is ascribed to a Kázi Yákúb, who, it is said, was afterwards put to death by the Emperor Akbar, and that the circumstances are related in the *Zuhúr-i-kutbí*. This is a book with which I have no acquaintance; but I find it recorded by Badáoni that Kázi Yákúb was suspended by the Emperor, his offence being that he had maintained it was illegal for a Muhammadan to marry more than four wives, as Akbar had done.

In the century immediately preceding the Muhammadan conquest, the Fatehpur District would seem to have been exceptionally rich in temples of the same style as those that still commemorate the power of the Chandel dynasty in Bundelkhand, across the Jamuná, at their ancient capitals of Mahoba and Khajuráo. But, on this side of the river, those that were built of what is generally supposed to be the more durable material, stone, have all been destroyed, and nothing of them now remains *in situ* beyond their foundations. The sculptured superstructure has been razed to the ground, and the fragments either buried on the spot or dispersed in the neighbouring villages, where they may be seen lying about in the lanes, or built up into the walls of the houses and modern temples.

The only two specimens of the style still left standing are both of brick; one at Tinduli, near the busy market-town of Bindki, on the road to the Mauhár Railway Station; which is shown in the accompanying

photograph (Plate VI); the other at Bahua, a few miles from the Chilla Tára Ghát across the Jamuná, on the road from Fatehpur to Bánda.*

The wonder that both these temples should have survived the rough treatment of so many centuries is increased by the fact that they have been simply set flat upon the plain without any foundations, and that no mortar has been used in any part of the construction, but only clay. The bricks, however, are not only of excellent quality, but are so clean cut and so well joined, that—but for actual violence—it is probable that the building would have stood uninjured to the present day. The moulded devices that form the surface decoration of the tower are of a simple and perfectly inoffensive character; but the porch, which was of stone, was covered with figure sculptures. This would seem to have provoked the wrath of some Muhammadan iconoclast; and, in a style of construction where the mutual interdependence of all the parts is so close, its destruction involved much damage to the remainder of the fabric.

About 100 years ago, the Tinduli temple was patched up by a Bráhman from the next village, who added the present porch and also restored with plain unmoulded bricks a considerable portion of the tower. Some of this new work has again given way; the plinth was also much broken, and unless the progress of decay had been quickly arrested, in the course of another year or two the whole building would have become a complete wreck. A small grant has therefore been made me by the Local Government, and out of this I have had the terrace re-made and on the east side strengthened with a masonry wall, in the centre of which I have introduced a recessed flight of 9 steps leading up to the level of the temple floor. The whole of the plinth also has been carefully restored all round up to the height where the ornamental work begins. This, it is hoped, will so secure the building as to prevent any further fall of the superstructure. The two or three fragments that remain of the sculptured doorway have been let into the front of the modern porch; which, if not ornamental, is at least useful as a buttress. As a necessary precaution against the future criticism of any anti-restoration fanatic, I have had two photos taken as unimpeachable evidence of the actual condition of the temple before the repairs were commenced. The shrine is at present occupied by a statue of Chatur-bhuj, after whom it is named; and it is possible that this may have been its original dedication. The village is inhabited by a comparatively recent colony of Kachhwáha Thákurs, and there is no local tradition as to the founder.

* Neither of these temples receives the slightest mention in the new Gazetteer of the Fatehpur District.

The building at Bahua is smaller, plainer, and in a much more ruinous condition. It must originally have been dedicated to Mahádeva; but at present it contains a recumbent statue of Náráyan with Lakshmi at his feet and Brahmá seated on a lotus growing out of his navel. The figure is set upright against the wall, and locally is known only by the name of Kakora Bába, to whom offerings are specially made by young wives, natives of the village, after the birth of their first child. Some 200 years ago, probably at the time when the new patron was installed, the temple which must then have been quite a ruin, was very ignorantly repaired, pieces of the sculptured doorway (which—as at Tinduli—had been thrown down) being built up into the roof and other places to which they did not belong. These I have taken out and joined together on the ground, and it now only remains to set them up in their proper position. This can be done at slight expense, with the help of two iron girders to support the broken architraves, and by building up a flight of masonry steps underneath. The plinth also is being repaired, and the ground raised, levelled and inclosed, to prevent injury from cattle. In both temples the *cella* under the brick *sikhara* is entirely of stone, with a flat cieling, above which the hollow brick shaft closely resembles in appearance the interior of an old-fashioned English chimney.

Other interesting remains of the Hindu period exist at Asothar and Hathgánw. The former town is the seat of a Rájá, who in the absence of any rivals, ranks as a person of some local distinction, though his estate consists of six villages only. All the other resident gentry in the district are Muhammadans, whose ancestors were mostly officials of the Lucknow Court, and who are now reduced to poverty. He belongs to the Khichar clan, which is recognised as a branch of the Chauháns, and had its original home at Khichidára, or Raghu-garh, in Central India. It was from there that one Deogaj Siñh came about the middle of the sixteenth century A. D. and had the good fortune to marry a daughter of the Gautam Rájá of Aijhi, now a small village, a few miles from Asothar. The descendants of this marriage, however, achieved no distinction of any kind, till 150 years later, when a member of the family, by name Aráru Siñh, discovered, as is said, a hidden treasure. Certainly by some means or other he contrived to secure for himself a more prominent position than that of any other Hindu in the neighbourhood: but it lasted only a very brief period.

The Asothar Fort was built by Aráru Siñh and is therefore of no antiquity; the town is many centuries older. Its original site is indicated by an extensive brick-strewn mound, two or three furlongs to the south of the Fort. On the highest part of it is a

small enclosure of recent construction, which bears the name of the eponymous hero, Asvatthámn, the son of Drona, though it would seem rather to have been the site of an old temple of Mahádeva. Part of the stone sikhara has been set up as a lingam ; the gurgoyled water-spout makes a trough for a well ; and many other sculptured fragments are either lying about, or have been built up into walls ; all being apparently of the 9th or 10th century. On a small mound further to the south are five large figure-sculptures. All are nude ; one is standing, the others are seated, cross-legged, with the usual accessories of lions, elephants and devotees. The hair of the head is in short close curls, as in statues of Buddha ; but the nudity is more a Jaini characteristic. The people call them the five Pándus, which is the popular name in all parts of India for any five sculptures of doubtful significance.

At Hathgánw the centre of the town is occupied by a considerable mound, the site of an old fort. Here stands a ruinous mosque, constructed from the wreck of two or more Hindu temples, like the better-known Assi Khamba at Mahában in the Mathurá district and the so-called Parmál's Palace at Mahoba. It is popularly known as the Háthi-Khána, or elephant stable, with reference to the legendary animal from whom the town is supposed to derive its name. This had been given by Rájá Jay Chand of Kanauj to a local saint, called Parásur Rishi, with a promise of a grant of all the land that the elephant walked over without stopping to rest. To prevent any future dispute as to the exact limit of its walk, it no sooner lay down than it was there and then turned into stone, and a fragment of the image still remains about two miles from the town, where an annual fair is held in its honour. The ruins consist of 23 pillars still standing, arranged in four aisles of 6 columns each, with a masonry wall at the back and sides. Apparently there was a fifth aisle, but if so, the whole of it has disappeared. The temple-doorway, a handsome piece of sculpture, has been set up by itself as the entrance to the mosque enclosure. The date of the columns is not later than the 10th century ; their present arrangement was probably carried out by the Sultán of Jaunpur in the 15th or 16th century.

In the District Gazetteer, published by the Local Government in 1884, these interesting relics are briefly and incorrectly noticed as follows : "There was a fort in the time of Rájá Jay Chand, but only the foundations of it remain." At Khakhreru, which since 1852 has been the head-quarters of a Tahsili, the same authority notes with similar inaccuracy, "there was a fort here, of which only the ruins now remain." A small mound by the side of the main road to Khága is, it is true, locally called the Garhi, or Fort, but it is clearly only the site of a

temple. This was thrown down by the Muhammadans, who used the materials to construct a grave-yard and mosque. In 1852 it may be presumed that these later buildings had apparently fallen into ruin and the bricks were then used, for a third time, in the construction of the new Tahsíli. All the carved stones, however, were left on the spot. These consist chiefly of architraves and door-jambs, handsomely carved in the style of the 10th century. A fair is held here at the end of Bhádon.

At Khairai, 5 miles from Khága on the road to Dháta, is a circular mound adjoining the village, which also must have been the site of a temple. Only the foundations remain *in situ*, together with traces of a broad flight of steps leading up from the level of the plain below. Several huge broken blocks of sandstone are lying about, possibly the fragments of a colossal lingam; and, in the village, let into the wall of a small modern shrine and in other places, are some mutilated figures and architectural details. In an extensive mound a little to the east, called the Garhi, I dug up three spirelets of a *sikhara*, each 3½ feet high, covered with the ornamentation characteristic of the 10th century A. D. From the time of Alá-ud-dín this village has been almost exclusively inhabited by Muhammadans.

The Gazetteer, as will have been observed, has adopted the native practice of styling any ruin a *Garhi*, or Fort, but it entirely omits to mention the remains of what would seem to have been the most considerable of all the old Hindu forts in the district. This is at the village of Paina, about a mile north of the Gházipur Tahsíl. The circuit of the wall with its gates and towers can be distinctly traced, and in the centre of the high broken ground which it encloses, is an inner citadel, further protected by a broad and deep moat. This fortified town is said to have been originally a stronghold of the Chandels, and may very probably be of still higher antiquity, but nothing is known of its history. The citadel was built, or rebuilt, by Aráru Siñh of Asothar, who probably gave it the name of Fatehgarh, by which it is now known.

Specimens of late Muhammadan architecture may be seen at the town of Khajuha, between four and five miles from the Tinduli temple. They form part of an extensive series of buildings erected by the Emperor Aurangzeb, to commemorate a victory over his brother Shuja in a battle that was fought in the neighbourhood in the year 1659. He took up as much as 223 acres of ground for his new works, which comprise a large walled garden, called the Bádsháhi Bágh; a masonry tank, with an area of 14 acres; and a fort-like saráe, with two lofty gates. There is now, except during the rainy season, very little

water in the tank; for large portions of the wall that enclosed it have fallen, and so much earth has been washed in through the breaches, that the bottom of the basin is little below the level of the adjoining fields and is mostly under cultivation. The garden has a lofty main entrance in the same style as the sarae gates, and an elegant smaller portal, which once opened on to the street, but is now blocked by a Post Office on the 'standard plan,' which has lately been built immediately in front of it. The garden walls have domed turrets at the corners; in other huge towers there are wells, with cool vaulted cells, and above them cisterns to supply water both for a cascade that forms the back ground of a shady alcove and for the fountains that played in three reservoirs of cut stone set in the different terraces. The Great Terrace runs the whole length of the tank and has its centre raised yet another stage, which is approached from the lower grounds through graceful stone arches with broad double flights of steps. Upon this upper stage are placed two Pavilions. One is maintained in repair, having been converted into a road-inspection house, though unfortunately it was not a little spoilt in the process; the other, it is hoped, will now be cleaned up and henceforth kept in decent order, without any utilitarian alterations or additions. Constructurally it is quite sound.

The Saráe has as many as 130 sets of vaulted rooms, three of which have been thrown into one to serve for a school, the rest are let out for the accommodation of travellers. In the centre of the square, which has an area of 10 acres, there is a domed mosque, and outside the gate are massive ranges of stabling for horses and elephants. The design of these memorial works is on a grand scale of Imperial magnificence, but the execution was probably hasty and there is not much delicacy in any of the details. The total outlay must have amounted to a very large sum.

Another building which dates from the same long reign but from the very end of it and is therefore about half a century later, marks a further decline in architectural skill. This is the tomb of Nawáb Abd-us Samad, who was a person of importance in the Imperial Court, and, enjoyed very extensive grants of land both in the Doáb and in Bundelkhand. At Mutaur near the Jamuná in the Gházipur Tahsíl of the Fatehpur district he built a Fort and a fine tank (which I have not yet seen) but his principal residence appears to have been in the town of Fatehpur itself, which he extended by the addition of a new muhalla, called Abu-nagar, after his eldest son Abu Muhammad. The tomb stands in extensive and well-wooded park-like grounds that were attached to the house and has stone arcades and traceried windows and must have cost a large sum of money. But it is a heavy, ill-designed structure and would seem to

have been hastily finished after the premature death of the founder's eldest son. The stone kiosques which surmount the four corners would have been pleasant places to sit in and look out upon the garden, but there is no possibility of getting up to them, as no staircase has been provided. This oversight may have been the result of haste at the end, but the original design is curiously faulty in making these small cupolas exactly the same height as the large central dome; an arrangement which produces a very flat, cumbrous effect. There are two inscriptions, which read as follows:

الله اکبر

• عین‌الانسان جان‌جان عبدالصمد خان درجهان •
• گوئی میدان فتوت برو ز انبای زمان •
• طائر روحش چودل برداشت زین دنیای دون •
• برفراز عرش رفت و گشت فردوس آشیان •
• خامهٔ تقدیر بر لوح ازل کرده رقم •
• کشف سال هجر تش از غم الم بر دوستان •

الله اکبر

غفران پناه ابو محمد ولد عبدالصمد خان روشنانی نوز دهم شعبان سنه هجری مطابق سنه ۴۸ جلوسی در عهد خلد مکان او رنگ زیب بادشاه غازی بعمر بست و سه سال ازین جهان گذران بگلگشت جنت شتافت و تعمیر مقره در سنه ۱۱۴۱ هجری ترتیب یافت •

Translation.

I. The paragon of mankind, the soul of souls, Abd-us-Samad Khán, having vanquished all the men of his time in the field of gallantry,

His soul, like a bird, resolved to sever its connection with this miserable world, and flew away and made heaven its rest.

The date of his departure can be calculated for his friends from the words *gham alam* (grief and sorrow) which the pen of fate inscribed on the tablet of *eternity*.

The letters in *gham alam* give the date 1111 (Hijri) thus: *gh* = 1000; *m* 40; *a*, 1; *l* 30; and *m* agai n 40: total 1111.

II. God is great. The asylum of forgiveness, Abu Muhammad, son of Abd-us-Samad Khán, Roshanáni, on the 19 Shabán, in the year 1116 Hijri, corresponding to the 48th year of the reign of the late Emperor Aurangzeb, at the age of 23, departed this life and migrated to heaven. The tomb was finished in the year 1121 Hijri.

The grounds contained a large masonry tank and ornamental pavilions, but these with the house itself were all dismantled only four or five years ago by some credulous persons, who hoped to discover a hidden treasure. Nothing of the kind was found, and the price of the

bricks and other materials, which were sold to a railway contractor, can scarcely have done more than cover the cost of demolition. The Gateway alone is now left standing, a massive brick building, but in the same plain and clumsy style as the tomb.

The principal memorial of the connection of the district with the Lucknow Court, during the latter half of the 18th century, is to be seen at Kora, where is a fine masonry tank constructed in a year of famine by Zain-ul-abu-d-dín the local Governor, under the orders of the Vazír Mír Almás 'Alí Khán. It has a handsome pavilion on its margin and across the road is a large walled garden, in two courts, with a high gateway between them, and at the far end a lofty double-storeyed building, in the grandiose style of the period, of good proportions, but without much delicacy of detail. The piers of the arcades are enormously massive, but there are terrible cracks in the walls, probably arising from an unequal settlement of the foundations, in consequence of the excessive mass of the superstructure. Tank, garden and pavilions were all bestowed in gift upen a Káyaṭh, Manná Lál *alias* Rám Prasád, who on becoming a Muhammadan, took the name of Haidar Bakhsh and had the title of Nasír-ul-Mulk conferred upon him by Nawáb Asaf-ud-daula. As he died childless, the property passed to the family of his brother, who had remained a Hindu, and is now owned by Ikbál Bahádur, son of Ráo Lál Bahádur, who distinguished himself by his loyalty in the mutiny. He built a temple of Sítá Rám on the margin of the tank; but attached to his private dwelling-house are the mosque and *imámbára* of his relative, the original donee, which he keeps in repair for public use, though they strike a visitor as rather curious appendages to a Hindu establishment.

About the same time as the tank, a long and substantial bridge was built over the Rind, the only one by which that river is crossed, just outside the town of Korá and immediately under the walls of the old Fort. In the Gazetteer it is incorrectly described as "a fine old Mughal bridge:" it is really due to a baniya, named Fatih Chand. The older Muhammadan bridge, of which the abutments remain, a hundred yards or so higher up the stream, was a very much smaller structure, apparently intended only as a private approach to the Fort.

Zain-ul-abu-d-dín's government is further commemorated by the town of Jafarganj, which he named after his son Jafar 'Alí Khán. Here he settled some artisans whom he brought from Lucknow, and the three grandsons of one of them still carry on what is the most notable art-manufacture in this district. Their business is that of cotton-printers, and the peculiarity of their work is that only the simpler part of the pattern is stamped, while all the finer portions are hand-painted. Bed-covers,

awnings for tents and a variety of small articles for native use are what they have hitherto been in the habit of making; but they have now made me some curtains, which are very handsome and effective, and would certainly command a large sale in the European market.

In 1801, when this part of the Doáb was included in British territory, Nawáb Zain-ul-abu-d-dín's eldest son, Bákir 'Alí Khán, was retained as farmer of the district under the new administration. He added a new quarter to the town Fatehpur, called after his name Bákir-ganj, and here stands his tomb built about 1815 A. D. with a mosque and other accessories. It is a group of no great architectural merit: but being surrounded by a small flower-garden and occupying a conspicuous position at the junction of four main thoroughfares, it forms the only picturesque feature in a singularly mean and unattractive town.

Since then, no Muhammadan has been in a position to spend any money upon building. But a great number of Hindu temples have arisen, some of which are interesting specimens of modern native architecture, especially two situated in the outskirts of the town of Khajuhá. One of these has a quasi-Muhammadan dome, the other a high spire with clustering spirelets in the old Hindu fashion, and the façade of each is reflected in the water of a large and well-filled masonry tank. Both were built about fifty years ago by rich local traders.

To any one like myself coming from such a thoroughly Muhammadanized district as Bulandshahr, the multitude of Hindu temples all over this part of the country is a very striking novelty in the landscape. For the most part they are small brick buildings with plaster arcading to ornament the walls, and are surmounted by domes more frequently than orthodox Hindu spires. There is considerable monotony in the design; but seen through the foliage of the mango and *mahua* groves with which the district abounds, they are graceful and picturesque objects, and one or more of them is visible from almost every single point of view in the neighbourhood of a village or along a main thoroughfare. Frequently the shrine is built in connection with a large masonry tank, a great boon to the wayfarer in such a thirsty land. The two temples above-mentioned are on a larger scale than usual, but are typical as regards treatment. In both the general effect is pleasing, and in the domed example the elaborate painted decoration is somewhat exceptionally artistic. In the other temple the details of the spire are clumsy, but considerable taste has been shown in the general grouping.

Fatehpur is invariably described—even in its own Gazetteer—as a district that contains nothing of the slightest archæological or artistic value. My notes, brief and incomplete as they are, suffice to show that

it has been maligned. In fact I believe there is scarcely a district in India about which such a remark could be made with truth, though it is popularly stated with regard to many. Given a slight faculty of observation, every part of the country will be found to abound with interest, not only as regards relics of the past but also in indications of still existent powers and capabilities.

Two classes of the community are deserving of special notice; 1st, the Singraurs, for their singularity; and 2ndly, the Gautam Ṭhákurs, for their number and importance. The Singraurs are not mentioned by name in any book that I have seen; not even in the local Gazetteer, where the people, who so style themselves, are included under the generic designation of Lodhas. Of this tribe they may be an offshoot, but they differ in many respects from the common stock. They are found only in the Ekdalá, Khágá and Khakhrerú Tahsíls, where they form almost the entire population of several villages and own a considerable quantity of land. As a corruption of the Sanskrit Sringavera, Singraur is the modern name of the Ghát, in the Nawáb-ganj Pargana of the Allahabad district, where (as is told in the Rámáyaṇa) Ráma, Sítá and Lakshman were ferried across the Ganges by the Nishád chief Guha. Not only is there this identity of name, but the tribal designation Lodha (which is for *lubdhika*) is a fair equivalent in meaning to the classical Nishád. Some traditional connection between the people called Singraur and the place Singraur might therefore naturally be expected; but so far as I could ascertain, none such exists. All the Singraurs of Ekdalá bear the title of Ráwat, which was conferred upon them by the Emperor Akbar, after a visit to that town, in which he was attended by his famous minister, Birbal, whose mother's sister lived there. All they could tell me as to their origin was that they came, in the time of the Pomárs, from the neighbourhood of Bánda, south of the Jamuná; which is in exactly the opposite direction from the Singraur Ghát, on the Ganges, which is to the north.

According to a very widely accepted tradition, the Gautam Thákurs once owned the whole of the present Fatehpur district, together with much adjoining territory on both sides of the Ganges. They claim descent from the Vedic saint Gotama, who is also the reputed ancestor of the Sakya tribe, of whom sprung the great Buddha; whence, in many countries where his religion flourishes, he is popularly known by his patronymic, Gautama. The Gautam Rája had his principal seat at Argal, a small secluded village in the Kora Pargana, buried in the ravines of the river Rind. Possibly the old Fort was so named as forming a natural 'bar,' or barrier (which is the meaning of the Sanskrit *argala*) against the approach of an invader. Similarly, Rind or Arind, the name of the

river, is a contraction for Arindama, 'the subduer of enemies,' which would seem to refer not so much to the depth of the stream as to the inaccessibility of its broken banks. The power of the family and the extent of its territory may have been greatly exaggerated, and certainly no external evidence of the truth of the local tradition has yet been supplied either by coins, or copper-plate inscriptions, as for the Gupta and Gaharwár dynasties, nor in temples of well-ascertained Gautam foundation, such as attest the wealth and magnificence of the Chandels. Neither do the Muhammadan chronographers make much mention of the long struggle against the Imperial forces to which the Argal Rája attributes the total disappearance of all his family records. So far also as I am aware, there are no extensive ruins at Argal, such as might be expected at a place which for many centuries was the capital of an independent principality. But on this point I cannot speak from personal knowledge, as I have never visited the spot. Not only is it far off the beaten track, but the Rája dislikes being seen by Europeans, as his personal surroundings are simply those of a small yeoman, and a visit dictated chiefly by curiosity might be regarded as an intrusion. To such extreme indigence is he now reduced, that his eldest son, and consequently the heir to one of the oldest titles in India, is now a Constable in the Hamírpur Police on a salary of Rs. 10 a month, and without much prospect of promotion, on account of his imperfect education. The second son has been given a small scholarship for his support, and is a pupil in the Government school in the town of Fatehpur, but though 15 years of age, he is only in the 9th class; and thus there is little prospect of any revival of the family fortunes in this generation.

As a set off to the want of material corroboration for the high pretensions of the Argal pedigree, it must be observed that the grants and migrations to which reference is therein made are all accepted as true by cognate tribes in different parts of the Province, who have obviously no interest in maintaining a fictitious legend of Gautam pre-eminence and their own comparative inferiority. It may also be noted that according to a local saying, mentioned by Gen. Cunningham in Vol. XI of the Archæological Survey, there was once a brick temple at every kos along the bank of the Rind. The word 'bank' must of course be interpreted in its very widest sense as including the whole of the valley and its neighbourhood, and the 'kos' as meaning not that the temples were at regular intervals of that distance, but that they were very numerous and close together. The two temples of Bahuá and Tindulí might thus be included in the series, together with those that the General describes in the adjoining Pargana of Sárh Salímpur, and all may with great plausibility be ascribed to the Gautam Rájas, who have always been specially

connected with the Rind river. Unfortunately, there are no inscriptions to confirm this conjecture, but some may yet be discovered. Accordingly, I think it desirable that the whole of the Rája's pedigree, as accepted by himself, should be put on record. The MS. in his possession from which I translate was written out about 60 years ago by one of the Kanungos of the Cawnpur district, which up to 1826 included the present Fatehpur district as a subdivision. It was evidently the work of a very careless or illiterate scribe, and is in several places quite unintelligible both to myself and to members of the family. In the mythological portion some well-known names are so grossly misspelt that they would defy recognition but for the context; thus Sántá, daughter of Somapád, appears as Santá, daughter of Lomayá; *p* and *y*, which in Nágarí are much alike, having been confused by the copyist. The MS. would seem to have been consulted by Sir H. Elliot, before writing his article on the Gautams in the Supplemental Glossary, and he has extracted from it all the facts of most conspicuous interest. But the complete genealogy, though for many generations it is only a bare string of names, may possibly hereafter be of service in helping to fix a date or determine a person mentioned in some other record.

Pedigree of the Gautam Rájpúts and of Rája Ganpat Sinh, of Argal, written out by Rám Bakhsh, Kánungo of Sárh Salímpur, according to the order of the Collector of Cawnpur (*c* 1826 A. D.).

1. Brahma.
2. Angiras.
3. Medhátithi.
4. Gautama.

"He celebrated a sacrifice at the hermitage of the Rishi Gokarna, from which sprung the four Kshatriya clans, the Chauhán, Parihár, Pamár and Sulankhi."*

5. Satánand.
6. Ṣaradván.
7. Ṣatánik.
8. Vibhándak.

"This was the time of Droṇa, Kṛipa and Aṣvattháma."

9. Sringi Rishi (Rishya-sringa) "who married Sántá, daughter of Somapád."

10. Ingi Rishi: "married Somantiti, daughter of Ajaypál, the Gahrwár Rája of Kanauj. Her dowry included all the land between Prayág and Hardwár, and from this date the family, who formerly were

* Notes copied from the MS. are marked with inverted commas to distinguish them from additions of my own.

Bráhmans, began to call themselves Kshatriyas." Most other authorities give the limits of the dower as from Kanauj to Korá, which is much more intelligible.

11. Rája Randh Dev.

12. Rája Ang Dev, "built the fort of Argal on the site formerly called Mahákáya."

In proof of the ancient sanctity of the spot, the following verse is quoted, which includes Mahákáya as one of nine famous places of pilgrimage:

Renukaḥ, Súkaraḥ, Kásí, Kálí, Kála, Bateṣvarau,
Kálanjara, Mahákáya, Ukhalá, nava muktidáḥ.

The same verse is quoted, in a more corrupt form, by Gen. Cunningham in Vol. XVII of the Archæological Survey, and for Mahákáya which, it may be noted, is one of the less common names of Mahádev, he gives Mahákála. This he explains *(ignotum per ignotius)*, by Ujam, a place of which I have never heard, unless Ujam is a misprint for Ujain. Ukhalá he was told meant simply 'any sacred place' like *tírtha;* but the fact seems questionable. I am more inclined to take it as the proper name of a particular locality, possibly the village on the Jamuná (more commonly spelt Okhla) which has lately become famous as the head of the new Agra canal. Here was a tomb (now pulled down) which bore an inscription dated in the reign of the Emperor Iltitmish (1210-1235 A. D.) which evidences the antiquity of the site. As to the other places; Renuka is on the Narmada near Jabalpur; Súkara is Soron in the Eta district; Kási is of course Benares; Káli is perhaps Calcutta; Kála may be Karṛa on the Fatehpur border; Batesar is in Agra, though it does not appear why the name is given in the dual number; and Kálanjara is the famous fort in Bundelkhand.

13. Rája Balbhadra Dev.
14. Rája Sumán Dev.
15. Rája Srímán Dev.
16. Rája Dhvajamán Dev.
17. Rája Shivmán Dev.
18. Rája Bansdhar Dev.
19. Rája Brat-dhar Dev.
20. Rája Agnindra Dev.
21. Rája Devanţ Dev.
22. Rája Susalya Dev "built forts at Silávan and Saun," villages in the Fatehpur district.
23. Rája Mahindra Dev.
24. Rája Jagat Dev.
25. Rája Bhúmipál Dev.

26. Rája Gandharv Dev.
27. Rája Indrajit Dev.
28. Rája Brahm Dev.
29. Rája Chhatradhar Dev.
30. Rája Rám-dev Sáhi.
31. Rája Nirmán Dev.
32. Rája Prithuráj Dev.
33. Rája Tilakdhar Dev.
34. Rája Dhírmán Dev.
35. Rája Satrajít Dev.
36. Rája Bhúpál Dev.
37. Rája Parichhat Dev.
38. Rája Mahipál Dev.
39. Rája Vishnudhar Dev "built a fort and palace at Naraicha" near Argal.
40. Rája Khasumán Dev.
41. Rája Surájmán Dev.
42. Rája Mukuṭmani Dev.
43. Rája Chandramani Dev. The Gautams of the Mirzapur district, who are very numerous there, say that they migrated from Argal in the time of Rája Chandra Sen. This name does not occur in the pedigree, but Chandramani is a near approach to it.
44. Rája Karan Dev.
45. Rája Salya Dev, "fortified Silauli."
46. Rája Gang Dev. "founded Kunvarpur."
47. Rája Dhírpunír Dev, "fought many times with Prithiráj and the Muhammadans. His Ráni went to bathe at Prayág: was assaulted by the Súbadár of Azimabad; Bhau and Bibhau of Múji-pattan, who also had gone there to bathe, came to her rescue and beat off her assailants. In return for this help, Bhupál Siñh, Gautam, of Bhaupur, gave his sister in marriage to Bhau with a dowry of 1400 villages on the other side of the Ganges. Their son* was Tilok Chand, the Ráo of Dauriya Khera. Bhúpál Siñh, Gautam, was recognized as Ráo of Gobha, and Pargana Jár was his jágir." The Ráni's champions were of the Bais clan, and the villages given in dowry constitute the tract of country known as Baiswára, which includes the greater part of the two Oudh districts of Unao and Ráe Bareli. Mr. Elliot in his 'Chronicles of Unao' gives a much more detailed version of the above famous incident, and suggests with great probability that the scene of the attempted rape was not at Allahabad, but at Baksar, another famous bathing-place, much

* 'Son' may be used indefinitely; Mr. Elliot represents him as *seventh* in descent and puts him about the year 1400 A. D.

closer both to Bhaupur and to Dauriya Khera. Munji-pattan is in the Dekhan. The Gautams of Bhaupur are distinguished by the title of Ráwat, and those of Gobha (the next village to Argal) are still styled Ráos. Bhaupur (for Bhava-pur, Bhava being a name of Siva) is on the right bank of the Ganges; immediately below Sivarájpur.

48. Rája Ratn Sen Dev, "married the sister of Jay Chand, the Gahrwár Rája of Kanauj. Had many fights with the Muhammadans." This popular identification of the Ráṭhors with the Gahrwárs is noticeable. It is very uncertain to what clan the earlier Rájas of Kanauj really belonged. The most famous of them was Bhoja I, who reigned from 860 to 890 A. D. and was succeeded by Mahendra Pál, 921; Bhoja Deva II, 925 to 950; and Vináyak Pál, 950 to 975, all in direct descent of father and son. A period of disturbance then seems to have followed, and eventually Kanauj was conquered about 1025 A. D. by Karṇa, son of Gangaya, the Rája of Chedi near Jabalpur. He, however, was not long after expelled by Chandra Deva, who founded the well-known Ráṭhor dynasty, which terminated with Jay Chand, the rival of Prithi Ráj. The sequence of events thus stated has been worked out with much ingenuity by Dr. Hoernle, who further conjectures that Chandra Deva's father, Mahichandra (son of Jasovigraha) is the same as Mahipála of the Pála dynasty of Benares, whose father's name is given as Vigrahapála. He was a Buddhist, as his eldest son and his descendants continued to be till their kingdom (Bihár) was subdued by the Muhammadans. The younger son, Chandra Deva, becoming a Brahmanist, established his capital at Kanauj, where he was succeeded by Madan Pál, Gobind Chandra, Bijay Chandra and finally Jay Chand.

49. Rája Kaling Dev, "built the Kora fort." This was to a great extent rebuilt three generations later by Bijli Khán after becoming a Muhammadan. Nothing now remains of it but the mosque and this too would seem to be of somewhat later date. The site is a high cliff commanding a very extensive view of the Rind ravines. The buildings were dismantled shortly before the mutiny and the materials utilized in the construction of the new Tahsíli.

50. Rája Súlráj Dev. "gave a *jágir* of 62 villages about Sivarájpur to Parmál of Mahoba" after the defeat of the Chandels by Prithiráj. But this seems irreconcilable with the previous statement that No. 47 was a contemporary of Prithiráj's. This Sivarájpur is a different place from that mentioned above and is in the Cawnpur district.

51. Rája Mulráj Dev, "had two sons, of whom

52. Rája Dev Pál Dev was the elder: the younger Bijay Sinh became a Muhammadan and took the name of Bijli Khán. The Rája gave 12 villages to the Banpur Gautams; built a fort and tank at Rahnsi; fought against the Emperor." Another brother, whose name is variously

given as Bair or Bariar, or Bihál Sinh, also became a Muhammadan and took the name of Bahádur Khán, and built a fort at Gaṛhí Jár, which is still owned by his descendants.

53. Rája Mám Dev "created the Rána of Chilli, with a *jágir* of 60 villages in the neighbourhood of Majháwan" in Pargana Sárh Salímpur.

54. Rája Bhauráj Dev "gave Har Sinh Dev the title of Ráwat with Bhaupur and other 14 villages. Gave Beduki to Kedár, a Kapariyá; Májhilgánw to Nilmani, Kurmi, and Chándpur to Chánd, a Bháṭ." Beduki must mean the town of Bindkí, which is now commonly said to derive its name from Bandagí Sháh, a Muhammadan fakir whom Kirat Sinh, one of the Gautam Rájas, had taken under his protection. The Kapariyás are a wandering tribe who go round to houses after a birth, singing congratulatory songs and receiving small presents in return. Kedár, to whom the grant was made, is said to have contrived the escape of one of the Rája's sons, who was kept as a hostage by the Muhammadans.

55. Rája Sahadev Ráj.

56. Rája Lachhman Dev.

57. Rája Bír Sinh Dev "married a daughter of the Gaharwár of Bijaipur. Fought 22 battles against the Emperor. Gave the Chaudhráhaṭ of Pargana Kora to Jaganbansi Bráhmans; 28 villages and the command of his army to the Athaiya Gautams; 12½ villages including Rámpur to Lála Tanḍsi Lál, Kámdár; and made a Ráj Kumár of Kharauli with a grant of 4 villages." The Athaiya Gautams (who evidently derive their name from the 28 (*athái*) villages that were granted them) are said to have been Jinwars by descent and to have ingratiated themselves with the Rája by teaching him the game of chess.

58. Rája Madan Dev.

59. Rája Mán Dev.

60. Rája Haribaran Dev "fought against the Emperor Humáyún at Kálpi and Hamírpur and was defeated." This appears to be the turning point in the fortunes of the family, who had espoused the cause of Sher Sháh and were thus marked out for vengeance by Humáyún on his return to India. In the Gazetteer the Rája's name is incorrectly given as Harcharan.

61. Rája Sangrám Dev.

62. Rája Bhairon Sáhi "defeated by the emperor, with total ruin of the family."

63. Rája Hamír Dev "defeated by Sháhjahán."

64. Rája Bhagavant Dev "married a daughter of the Sombans Rája of Pratápgarh. The family Fort destroyed by Sháhjahán."

65. Rája Indrajit Dev.

66. Rája Ḍúgur Sáh Dev, 1607 A. D.
67. Rája Haribal Dev, 1643 A. D. "defeated by the Súbadár."
68. Rája Himmat Bahádur Dev, 1646 A. D.
69. Rája Achal Sinh Dev, 1687 A. D. "defeated in 1727 by Saadat Khán. Utter destruction of all the family property."
70. Rája Sadan Sinh Dev 1729 A. D.
71. Rája Amán Sinh, 1755 A. D.
72. Rája Ganpat Sinh, 1817 A. D.
73. Rája Lál Shio Rám Sinh, born 1837 A. D.
74. Kunvar Ratn Sinh.

On the Geography of India in the Reign of Akbar. Part II.—*By* JOHN BEAMES, B. C. S.

(With a Map.)

No. II. SUBAH BIHAR.

In reconstructing the details of this large and important province very great difficulties have to be encountered. It is not so much that changes have taken place, for that has happened everywhere; but that for a long time past no record has been kept of such changes, rather there has been at one time an effort to obliterate all traces of them, and at another a policy of deliberately refraining from enquiring into them. The intentional falsification of the fiscal records by the later Muhammadan Subahdars, and the Permanent Settlement of Lord Cornwallis have each in its own way done much to efface the former political geography. That so many of the old parganahs are still traceable is due more to the conservative instincts of the people, than to any care that has been bestowed upon the matter by those in authority.

Even in Todar Mal's time parts of Bihár seem to have been somewhat imperfectly known. In the whole of the large Sarkár of Múngír (now generally written Monghyr) the areas of the mahals are wanting, and in some of the other Sarkárs also we find areas omitted here and there. The information regarding the contingents of horse and foot soldiery to be furnished is not given in detail for each mahal, but in most cases only in the lump for each Sarkár, and the castes or tribes of the proprietary families are only mentioned in a few instances. Moreover there are large areas on the map which are not covered by any of the mahals named in the lists, and which we must therefore assume to have been unassessed, and probably uninhabited, in those days.

When we examine the extent and boundaries of the whole province as given in the Aín we find nevertheless that they correspond tolerably closely to those of the present day. The length is said to be from Gaṛhi to Rohtás 120 kos. Gaṛhi is the old fort now known as Teliágaṛhi a little to the west of Sahibganj at the point where the Santhál Hills touch the Ganges. This fort was regarded as the key of Bengal, and the beginning of that province. By Rohtás we must understand, not the historical fortress of that name, but the western boundary of the Sarkár of which it was the capital, for the fortress itself as will be seen from the map lies far to the east of the boundary. Taking Akbar's kos at about $2\frac{1}{2}$ English miles,* the distance would be about 300 miles; but this must have been obtained by measuring along the then existing roads, for the actual distance as the crow flies is only 210 miles.

Similarly the breadth from north to south, which is vaguely described as being from Tirhut to the hill ranges, meaning evidently the northern ranges of the Vindhyas, is given as 110 kos = 275 miles. But measuring as the crow flies on the modern map from the northern boundary of Tirhut to the southern boundary of Monghyr,† we find the actual distance not more than 160 miles. It will also be seen further on that some of the mahals included in Sarkár Tirhut are now under Nepal, and that it is impossible to decide how far to the south among the scattered and broken groups of hills which run all through this part of the Subah, Muhammadan power, or at any rate Muhammadan pretensions, extended.

Abul Fazl states the boundaries of the Subah as follows. On the east Subah Bangálah (Bengal), on the west Subahs Iláhábád and Avadh, on the north and south high mountains, meaning of course the Himalayas and Vindhyas respectively. These boundaries correspond with tolerable accuracy to the present ones on the east and west, though they can hardly be said to be defined at all on the north and south any more than they are in the present day. On the north disputes with the Nepal State have recurred at intervals down to the present time, and on the south the boundaries between districts in the Bihár Province and those in Chota Nágpur are varied from time to time to suit the exigencies of modern administration. The country is hilly and irregular, and it is difficult to draw a definite line of demarcation between the tracts inhabited by an Aryan population, and those inhabited by Kolarian and Dravidian tribes, such as Santhals, Khonds and Koles. The former only would, it may be supposed, be included in the Subah.

* Elliot. Races of N. W. P. vol. ii, p. 194. The exact length is 2 miles 4 furlongs 158 yards.

† I mean the modern districts bearing those names, not the Sarkárs of the Aín.

The southern boundary has in fact always been vague and undefined. The Muhammadan forces consisting as they did, chiefly of cavalry, seem to have been very easily beaten back from broken or rocky country, and it will be seen further on how even the insignificant hills which cut in two the southern part of the province impinging on the Ganges at Múngír, remain independent down to a comparatively late period, and how the names of the mahals in Sarkar Bihár and Múngír testify to the scattered nature of Muhammadan power in those parts.

The Ganges, Son, and Gandak are mentioned as the chief rivers of the province, and a petrifying power is ascribed to the waters of the Son. This is true only of certain springs in the upper part of its course. It is also correctly stated that the Son, Narbadda and Jhulá rivers all rise close to each other on the Amarkantak mountain.* But on the whole the geographical details regarding this Subah are decidedly meagre when contrasted with those of Subahs nearer the capital.

Todar Mal's Settlement of A. D. 1582 lasted unaltered only for about a century, a fresh Settlement having been made in the 27th year of Aurangzeb, A. D. 1685—by which the total revenue of the province was raised from fifty-five to eighty-five lakhs. The only territorial change was the division of the old Sarkár of Ruhtás into two; Ruhtás and Bhojpúr.

This Settlement did not remain in force so long as its predecessor having been superseded in 1750, at a time when the power of the Mughal dynasty had virtually come to an end, by a fresh Settlement the details of which were carried out by Jánaki Rám the Naib Diwán of Bihár, under the orders of Ali Vardi Khán, Subahdar of Bengal. The revenue was now further raised to ninety-five and a half lakhs. Although the old territorial divisions of Sarkárs and mahals remained nominally unchanged, there were nevertheless in reality very great changes made. It would lead me too far from my present subject to enter into details of these changes, and they could not be understood without reference to official maps which are not available to the public. The object aimed at was the increase of the revenue levied from the people to the highest practicable point, while the increase of revenue payable to the central Government should be as small as possible, so that there might remain

* There is apparently an error in the Persian text of the Ain (Vol. I, p. 416) where the Son is said to fall into the Ganges from the north instead of from the south. The text is here, however, corrupt. That the Son is meant seems clear from the mention of Munir as the point of junction. If we can read the doubtful word نيزو or نرو as سريو *sarya*, the passage would refer to the Ghográ, which does fal into the Ganges from the north oppposite Munir. Possibly the word بي or ني preceding نيزو may be for naï = ندي *nadí* 'river;' as Abul Fazl sometimes employs Hindí words.

a very great difference between what the Subahdar had to receive from those below him, and what he had to pay to those above him; such difference naturally going into his own pocket. Another object was to carve out for favourites and dependants new estates in various parts of the province without reducing to a corresponding extent the revenue demandable from the landholders whose estates were thus encroached upon and diminished. With this view a village here and a village there, a few bighas in one place and a few more in another, were created into an estate, the grantee of which had to pay a certain revenue, while the persons from whose estates these pilferings had been made still continued to pay their old rent, or at most a rent only slightly reduced.

These tactics were followed by large proprietors in respect of their own estates, and in fact every one who was powerful enough to rob the State or his neighbours, robbed to his heart's content. In addition to this constant spoliation and forcible transfer of estates, there was the unceasing resumption of rent-free tenures, and the creation of all sorts of fresh imposts, under the generic title of *s'áir* or "remainder," and other quaint technical names, mostly in order to provide an income for the various ranks of officials, or to meet some new extravagance of the Subahdar himself. Whosoever wishes to bewilder himself by an examination of this extraordinary complication of revenue matters, may read Mr. J. Grant's Analysis of the Finances of Bengal, and may wonder at, though he will probably not understand, the remarkable skill with which the writer disentangles the web of accounts, and produces as the result the "Jamá tashkhís bandobasti" of A. D. 1765, on which the Permanent Settlement was based. With the Permanent Settlement the curtain falls on the subject; and from that time to the present all is darkness.

I now proceed to the details of this Subah. It contained seven Sarkárs, *viz.*:—

Bihár.	Hájípúr.
Múngír.	Sáran.
Champáran.	Tirhut.

Ruhtás.

Comprising 199 mahals or parganahs. The total revenue is given in the introductory remarks as dams 22, 19, 19, 404 of which dams 17, 26, 81, 779 are from *nakdí*, and dams 4, 92, 37, 630 *sayúrghál*. These figures, however, do not agree with the result obtained by adding together the revenue of each of the seven Sarkárs as given in the lists which follow the introduction. The total of the figures for the Sarkárs is dams 38, 51, 18, 242.* As regards the area no definite statement can

* See Thomas's Pathan kings of Delhi, p. 388, for a discussion as to the accuracy of Abul Fazl's figures.

be arrived at, for though the total area is given in the introduction as 24,44,120 bigahs, these figures refer only to the measured (*i. e.*, cultivated) area "zamín-i paimúdah" and in the Sarkár lists detailed areas are wanting for all the parganahs of Sarkár Múngír and many of those in the other Sarkárs.

I. Sarkár Bihár.

46 mehals. Area 9,52,598 bigahs. Revenue 8,019,639 dams nakdí under the head of zabti* and nakdi: 2,270,147 sayurghál. Castes various. 2,115 horse 67,350 foot.

1. Arwal. 5,79,089 b. 5 b. 4,26,780 d. 1000 foot.
2. Ukhrí. 49,401 b. 10 b. 3,747,940 d.
3. Ikal. 40,404 b. 4 b. 3,35,260 d. Bráhmans and Afgháns. 200 foot.
4. Amretú. 24,387 b. 19 b. 1,821,333 d. 16,035 s.
5. Amblo. 8,47,920 d. Bráhmans 250 foot.
6. Anchhá. 10,290 b. 7 b. 6,700,000 d. Afgháns. 20 horse. 300 foot.
7. Antarí. 1,998 b. 9 b. 1,47,980 d. Káyaths. 20 horse. 200 foot.
8. Bihár bá havelí. Has a fort of stone and burnt brick. 70,683 b. 9 b. 5,534,157 d. 6,53,200 s. 10 horse. 400 foot.
9. Bhiláwar. 48,310 b. 3 b. 3,651,640 d. 9000 s. Bráhmans. 500 foot.
10. Biswak. 35,318 b. 18 b. 2,706,539 d. 1,708,130 s. Shaikhzádahs. 300 foot.
11. Pilich. 30,030 b. 18 b. 2,270,438 d. 59,185 s. Bráhmans. 500 foot.
12. Baliá. 26,000 b. 18 b. 2,056,502 d. 85,747 s. Rájputs. 20 horse. 400 foot.
13. Patna. Has two forts, one of burnt, the other of unburnt brick 21,846 b. 8 b. 1,922,430 d. 1,31,807 s.
14. Phulwárí. 20,225 b. 19 b. 1,585,420 d. 1,18,120 s. Rájpúts. 20 horse. 700 foot.
15. Pahrá. 12,283 b. 6. b. 941,160 d. 18,560 s. Bráhmans. 20 horse. 400 foot.
16. Bhímpúr. 10,862 b. 15. b. 824,584 d. 24,424 s.
17. Pundág. 727,640 d. Jabardah. 300 horse. 2000 foot.

* "Zebty, resumed lands appropriated in jageer to defray the expenses of the standing military force," but subsequently "included in the receipts of the royal treasury." (Grant's Analysis, p. 255.)

18. Tiláḍah. 39,053 b. 12 b. 2,920,366 d. 232,080 s. Shekhzádahs 20 horse. 300 foot.
19. Jarar. 12,930 b. 10 b. 979,363 d. 880 s. Shekhzádahs. 20 horse. 500 foot.
20. Chirgáṇw. 904,440 d. Bráhmans. 20 horse. 300 foot.
21. Jaychampá. 620,000 d. Jabardah. 20 horse. 600 foot.
22. Dádar. 262,500 d.
23. Dhaknair. 215,680 d.
24. Rúḥ. 250,100 d. Bráhmans. 20. horse. 1500 foot.
25. Rámpúr. 363,820 d.
26. Rájgaṛh. 3,756 b. 12 b. 288,228 d. 17,225 s.
27. Sunaut. 36,780 b. 7. h. 28,24,180 d. 20 horse. 500 foot.
28. Samái. 32,514 b. 3 b. 2,537,080 d. 62,380 s. Káyths. 10 horse. 200 foot.
29. Sihrah. 20,79,000 d. Rájpúts. 500 feet.
30. Sánḍah. 24,962 b. 2 b. 1,889,956 d. Afgháns. 500 foot.
31. Siyúr. Stone fort on top of a hill. 14,145 8 b. 1,250,591 d. Bráhmans. 200 horse. 5000 foot.
32. Ghayáspúr. 84,205 b. 5,657,290 d. 227,554 d.
33. Gídhaur. Stone fort on top of a hill in the middle of the jungle. 1,452,500 d. Rájpúts. 259 horse. 10,000 foot.
34. Kátíbhará. 7,37,540 d.
35. Kábar. 7,400 b. 9 b. 5,60,875 d. Káyaths. 30 horse. 700 foot.
36. Gúh. 374,880 d. Rájputs. 100 horse. 1000 foot.
37. Ghátí Bihár. 360,820 d.
38. Karanpúr. 363,820 d.
39. Gayá. 951 b. 74,270 d. 14,235 s.
40. Munir. 89,039 b. 15 b. 7,049,179 d. 325,380 s.
41. Masauḍhá. 67,161 b. 10 b. 4,631,080 d.
42. Máldah. 28,121 b. 9 b. 2,151,575 d. 49,805 s. Bráhmans. 100 horse. 3000 foot.
43. Manaurá. 7,706 b. 6 b. 585,500 d. Bráhmans. 20 horse. 500 foot.
44. Mahair. 23,937 b. 19 b. 1,779,540 d. 47,700 s. Bráhmans. 200 foot.
45. Narhat. 30,555 b. 7 b. 2,380,309 d. 5 horse. 200 foot.

At the beginning of the list it is stated that there are 46 mahals, but the list itself only contains 45. Either Bihár is to be counted as two mahals, one for the Haveli, and one for the Baldah, or No. 21 Jaychampá must be counted as two, as the modern parganahs of Chai and Champá are distinct from one another, and may have been so in former times.

It is important to observe the situation of the mahals whose area is given as distinguished from those for which only the revenue is stated, as this distinction affords a means of judging how far Muhammadan supremacy really extended. On comparing the list with the map accompanying this article it will be seen that the mahals whose measurement is given are those lying in the great plain of Bihár, while most of those in and between the hills are unmeasured, and there is every reason for believing that they had not at the time of the Settlement been really conquered.

I have succeeded in identifying all but two out of the forty-five mahals of this Sarkár, though some are only conjecturally traceable.

5. Amblo. There is no parganá of this name now extant in either Gya or Patna districts. There is Amlo (now called Amlo Mutia) in Bhágalpúr, but that is separately given under Sarkár Múngír. It is just possible that in the general ignorance that prevailed regarding the outlying parts of of Sarkár Bihár this mahal may have been entered twice over by mistake. It is one of the unmeasured mahals many of which were put down by Todar Mal from hearsay or other vague indications.

16. Bhímpúr is still extant, but it was formerly larger than at present, a new parganah Shahjahánpúr having been carved out of it, the name of which shews that its creation was later than Akbar's days.

17. Pundág is the same as Palámau and roughly indicates a vast tract of country lying south of Sherghotty and only nominally subject to the empire in the time of Akbar as it was not conquered till the reign of Aurangzeb,* though there had probably been occasional raids into various parts of the country before, and the name was therefore known to Todar Mal and inserted in his rent roll with a purely imaginary revenue. The name of the proprietary clan in this and No. 21 is given as جبردہ Jabardah in the Persian text; but this is a copyist's error for چیروہ *cheroh*, the Muhammadan way of spelling the name of the well known aboriginal Chero race.†

21. Jaychampa. Properly Chai Champa two contiguous parganahs now in the north of Hazaribagh district, invaded about A. D. 1340 by a general of Muhammad Tughlak.‡ The old fort of Chai is still in existence. These mahals like Pundág were probably only known by hearsay to Todar Mal and not actually subject to the Empire.

23. Dhaknair. Properly spelt Dakhnair, *i. e.*, Dakshiṇa nagara. Nagara becomes *nayara* in Prákrit, *e. g.*, Bikanír, Bhatnair, etc.

* See a full account by Blochmann in J. A. S. B. Vol. XL, p. 111.

† *ib.* p. 118.

‡ Col. Dalton's note in Hunter's Statistical Account of Hazaribagh, p. 67.

25. Rámpúr. An unmeasured mahal probably the pargana of that name in Hazáribagh, known to, but not possessed, by the Mughals.

26. Rájgaṛh. The celebrated Buddhist centre Rajgir. Abul Fazl has substituted the familiar termination *gaṛh* for the less common *gir* from Rájagṛiha the original Sanskrit name.

29. Sihrah. There is now no parganah of this name, the village of Sahra is in the south-east corner of Ghayáspúr.

31. Siyúr. There is no parganah of this name, but the fort of Sior or Siyúr Muhammadabad is well known. It is in parganah Rúh and the mahal dependent on it seems to have been very extensive including not only Pachrukhi but also the great zamindárí of Kharakdihá in Hazaribágh.* It is strange that its area should be given, while that of Rúh is not. The measurement, however, can refer only to a very small portion of the whole of this vast territory.

33. Gidhaur. Gṛidhrapúra = vulture-city. This is the capital of the great estate of this name; even in Akbar's time the Rája was one of the great chiefs of Bihár. The mahal included the modern pargana of Chakáí and stretched nearly as far as Rohiní.

34. Kátíbhará. I have been unable to identify this place.

37. Ghátí Bihár. This is now called Shahr ghátí (vulgo Shergotty) and is a large and well known place at the foot of the ghâts or mountain passes leading from the highlands of Chutia Nágpúr to the plain of Bihár.

38. Karanpúr. A large parganah of this name is still extant south of the town of Hazaribágh. It was probably entered on the rent roll by Todar Mal merely on hearsay, the name having become known from the Muhammadan raids on Kokrah and Pundág. It could not have been actually subject to Akbar.

The Sarkár of Bihár thus reconstructed occupies the whole of the modern districts of Patna and Gaya, the western half of the great plain of Magadha. It also includes certain tracts now included in the districts of Hazaribágh and Lohárdagá in the Chutiá Nágpúr country, but as has been shown above, these latter tracts, such as Pundág, Chai-Champá, Karanpur, etc., were rather claimed, than possessed by the sovereign of Delhi, and it is impossible to say how far they extended. In the map which accompanies this article they have not been coloured but merely indicated by a line under the name.

It may be interesting to students of the science of language to notice that the area of this Sarkár corresponds pretty accurately with the area of the modern Magadhi dialect of Bihár as shewn in the map prefixed to Part I of Mr. Grierson's grammars of the Bihárí language

* Ibid, p. 129.

recently published. In fact the dialectic boundaries throughout this Subah correspond in a remarkable manner with those of the Sarkárs. Thus Sarkárs Ruhtás, Sáran and Champáran speak Bhojpúrí, Sarkár Bihár Magadhí, Sarkárs Tirhut, Hajipúr and Múngír Maithilí.* This coincidence may be merely accidental, and due to the fact that the language boundaries were decided by the same considerations as the administrative boundaries, namely, the leading natural features of the country such as hills, rivers and so on. There are, however, parts where no such natural boundary exists, and in those the coincidence is not easily to be accounted for. The remarkable tongue-like projection of Magadhí south-eastwards beyond Jamui almost as far as Deogarh is apparently to be accounted for by the fact that all that country belonged to the Rájas of Gidhaur who on conquering it from the Santhals probably settled it with cultivators from the western parts of their territory who naturally spoke Magadhí.

II. Sarkár Múngír.

31 mahals, 109,625,981½ dams. Castes various. 2,150 horse. 50,000 foot.

1.	Abhaypúr.	20,00,000 d.
2.	Uslá.	89,760 d.
3.	Ango.	147,800 d.
4.	Amblo.	50,000 d.
5.	Bhágalpur.	46,96,110 d.
6.	Baliá.	32,87,320 d.
7.	Pharkiyah.	30,00,000 d.
8.	Pahárpárah.	140,920 d.
9.	Pasaí.	132,300 d.
10.	Tanúr.	88,420 d.
11.	Chhai.	92,80,000 d.
12.	Chanduí.	3,60,000 d.
13.	Dharmpúr.	40,00,000 d.
14.	Ḍánḍ Sukhwáráh.	1,36,000 d.
15.	Rohiní.	95,360 d.
16.	Sarohí.	17,73,000 d.
17.	Sukhdhará.	670,240 d.

* I think, however, that Mr. Grierson has carried northern Maithilí too far to the east in Purniah and the Morang. I was Collector of that district for four years, and my impression is that Maithilí is confined to the parganah of Dharampúr which formed part of Sarkár Múngír. In central and northern Purniah the language is utterly corrupt and too much mixed with Bengalí to be fairly called Maithilí. This, however, will be decided by Part VII of the Series of Grammars.

18.	Singhaulí.	360,000 d.
19.	Súrajgaṛh.	2,99,445 d.
20.	Sikhrá ábádí.	1,60,000 d.
21.	Saṭiárí.	58,730 d.
22.	Kahlgánw.	28,00,000 d.
23.	Kherhi.	689,044 d.
24.	Kojrah.	260,602 d.
25.	Kheṭki.	160,000 d.
26.	Lakhanpur.	633,280 d.
27.	Masjidpur.	12,59,750 d.
28.	Múngír bá Haveli.	808,907½ d.
29.	Masdí.	29,725 d.
30.	Hindue.	108,300 d.
31.	Hazártakí.	9,182 d.

In this Sarkár it is noticeable in the first place that not a single mahal contains more than a statement of the revenue payable by it. There is no information as to area, ruling castes, or anything else. This is the more remarkable because Todar Mal himself resided for some time at Monghyr, though it is true he was at that time more intent on warlike than on financial pursuits. There is much to shew that all this south-eastern corner of Bihár was very imperfectly known to the Muhammadans, for instance, the important and well known estate of Kharakpúr does not occur as the name of a mahal at all. It is still the largest estate in south Bihár though it has passed away from the ownership of the ancient line of Rájas. Blochmann has discovered from the Akbarnáma that at the time of the conquest of Bengal and Bihár by Akbar Rája Sangrám Sahaí of Kharakpur was one of the three principal chiefs of the country, and as he submitted to Akbar and with the exception of one or two passing revolts remained on the whole tolerably submissive all that reign one would expect to see his estate figure on Todar Mal's list. The only way to account for the omission is to suppose that Kharakpur itself was not at that time a separate mahal, and as nearly the whole of it consisted of hills either barren or covered with jungle there was probably no assessment, or if brought on the books at all, any assessment there might be would probably be Sayúrghál, and as no Sayúrghál is recorded for this Sarkár, the name of Kharakpúr would not find entry. All or nearly all the other parganas in this vast estate are duly mentioned, *viz.*, Dándá Sukhwára, Hendueh, Hazártaki, Lakhanpur, Masdi, Pahárpárah, Sahrúi, Sukharábádi, Amlo Mutia, Wasila and Kherhi, and it may be supposed that the land on which the fort and town of Kharakpur stood was included in one or other of these parganahs.

Of the mahals entered in the above list all but three are still extant though probably the area of many of them has varied considerably.

2. Uslá is now written Wasílá.

3. Ango, not traceable.

4. Amblo, now called Amlo Mutia far down in the south of the Bhagalpúr district.

8. Pahárpárá. This word is written in the text پتّهارا with a var. lectio پهارا I propose to read پهار پارا and to identify the mahal with that now called Parbatpárá, *parbat* and *pahár* meaning the same thing.

10. Tanúr. The record-keeper of the Monghyr Collectorate conjectures that the true reading is تهور, there is a mahal of this name Tahaur or rather Tahaurganj in Kharakpúr. This seems a somewhat doubtful identification. There is no place called Tanúr, as far as I can learn.

16. Sarohi now written شهروي Sahroi.

17. Sukhdhará seems to be a mistake for Sukhohará due to the similarity between د and و. It was once a separate pargana but is now included in Haveli Monghyr.

21. Satiárí now included in Bhágalpur.

25. Khetki not traceable, but is probably intended for Khetauria.

This Sarkár runs far down south-eastwards into the jungly tracts now in the Santhal Parganas and it is impossible to fix any definite boundaries in that direction. Probably the Muhammadans did no more than make occasional raids into this wild and difficult country, and the mahals lying in this direction, such as Hindue (Handoi, Hendueh, etc.), Rohiní and Pasai have therefore been treated in the same way as Pundág and Chai Champá of Sarkár Bihár, and merely underlined.

In the north too the parganas of Pharkiyá and Chhai covered vast areas of sparsely peopled swamps and marshes and it is uncertain how far their boundary could be held to extend on the north. Much of the country included in the modern parganas of Náthpúr, Dhaphar, Náridigar and Nisankhpúr Korá was down to comparatively recent times under the rule of the Nepalese government. None of these names are found in the Ain under Sarkár Múngír, though as will be shewn further on it is possible that some part of this country is included under one or other of the easternmost mahals of Sarkár Tirhut. The large mahal of Dharmpúr now lying east but formerly west of the great Kosi river which has changed its course within recent times,* forms the eastern

* Almost within the memory of living men the Kosi flowed to the north-east of the town of Purniah and its old course may still be clearly traced by a broad and deep depression in the soil running for some fifty miles across the district. Even

frontier of Bihár and its boundary with Sarkar Púrniah of Subah Bengal is distinct and unmistakeable, but how far it went to the north cannot now be said with any certainty.

III. Sarkár Champáran.

3 mahals. Area 85,711 b. 5 b. 55,13,420 d. 700 horse. 30,000 foot.

1.	Simráṇw.	7,200 b. 2 b.	5,90,095 d.
2.	Mihsi.	56,095 b. 7 b.	35,18,435 d.
3.	Majhowa.	22,415 b. 16 b.	14,04,890 d.

All three mahals are still extant. Simráṇw lies partly in British territory and partly in Nepal. The ruins of the old capital of Simráṇw (Samara gráma = battle-village) lie among dense jungle just across the Nepal frontier. Mihsi or Mahsi lies to the south of it.

3. Majhowa is a very large parganah in the present day stretching as far as Tribeni Ghat, the point where the Gandak issues from the hills. It was not so large in the time of Akbar, for the great forest of the Champak tree from which the district takes its name (चम्पकारण्य champakáraṇya = Champáran) was not fully conquered and settled by the ancestors of the Mahárája of Bettiah nor was the now flourishing town of Bettiah founded till a much later date. I have shewn on the map only the eastern and southern boundaries of this mahal, it is impossible to say how far it may have extended in a north-westerly direction. It, however, probably touched on Sarkár Gorakhpúr in Subah Avadh just across the Gandak river, much of which especially on its eastern frontier was covered with forests.

IV. Sarkár Ḥájípúr.

11 Mahals. Ten towns قصبه 436,952 b. 15 b. 2,73,31,030 dams.

1.	Akbarpur.	3,366 b. 17 b.	1,95,040 d.
2.	Busáḍí.	10,851 b. 14 b.	6,24,791 d.
3.	Bisárá.	1,06,370 b. 7 b.	63,80,000 d.
4.	Bálágachh.	14,638 b. 2 b.	9,13,660 d.
5.	Patkhará.	58,306 b. 13 b.	35,18,354 d.
6.	Hájipúr Haveli.	62,653 b. 17 b.	38,33,460 d.
7.	Ratí.	30,438 b. 13 b.	18,24,980 d.
8.	Suresá.	1,02,461 b. 8 b.	27,04,300 d.
9.	'Imádpúr.	12,987 b. 7 b.	7,95,870 d.
10.	Kadahsandh.	8,76,200 d.	
11.	Naipúr.	27,877 b. 9 b.	16,63,980 d.

within my own period of service the Kosi has removed many miles to the west of the course shewn on the Atlas of India and other comparatively recent maps; one stage of its frequent changes is marked by the chotá Kosi which still forms the boundary of pargannah Dharampúr.

The whole of the above parganahs are still in existence aad clearly identifiable under their ancient names. Even in the cases of Nos. 5 and 10 there is no doubt as to what is meant.

2. Is usually spelt in the present day Bhusaḍah بھوسڑہ

3. Bisárá is a very large pargannah, now broken up into Tappas, the names of which are more used than that of the pargannah itself. Its actual situation and extent, however, are well-known.

5. Patkhará پٹکھرا is the reading given in Blochmann's text. He gives, however, in a note a *var. lect.* تیگھرا and this is correct. The old pargannah of Teghará lying along the left bank of the Ganges, in the south-east corner of the Sarkár, is now known as Mulki, but the town of Teghará still retains its old name.

10. Kadahsand. This name is spelt in many ways in various MSS. but there can be no doubt that by it is meant the present pargannah of Gadehsar occupying the north-western point of the Sarkár.

This Sarkár is a long and rather narrow strip comprising the tract between the Burh Gandak river on the north-east, and the Gandak and Ganges on the south-west and south. North of the Burh Gandak lies Sarkár Tirhut, though in later times that name was applied to a much larger area.

V. Sarkár Sáran.

17 mahals. Measured area 229,052 b. 15 b. 60,172,004½ d. Castes various. 1000 horse. 50,000 foot.

1.	Andar.	7,218 b.	4 b.	5,34,990 d.
2.	Barái.	7,117 b.	10 b.	5,33,820 d.
3.	Bál.	66,320 b.	5 b.	48,93,378 d.
4.	Bárá.	15,059 b.	3 b.	383,797½ d.
5.	Narhan.	8,611 b.	8 b.	6,54,508 d.
6.	Pachlakh.	9,266 b.	15 b.	4,87,997 d.
7.	Chirend.	8,413 b.	13 b.	6,33,270 d.
8.	Chaubárá.			4,00,000 d.
9.	Júinah.	6,763 b.	8 b.	3,09,282 d.
10.	Digsí.	5,825 b.		2,77,630 d.
11.	Sipáh.	2,662 b.		2,90,592 d.
12.	Goá.	28,049 b.	3 b.	20,12,950 d.
13.	Kalyánpúr.	17,437 b.		7,74,496 d.
14.	Kashmír.	16,915 b.		13,14,539 d.
15.	Mángjhi.	8,752 b.	19 b.	6,11,813 d.
16.	Mandhal.	9,405 b.	7 b.	6,97,140 d.
17.	Makír.	10,936 b.	14 b.	8,11,095 d.

This Sarkár like that of Champáran has no Havelí; but it is well preserved. In the present day sixteen out of Todar Mal's seventeen mahals are in existence, though some of the modern names differ slightly from those in the Aín.

5. Narhan is entered here though not its proper place in alphabetical order, because it is by mistake written Barhan in the Aín. There is, however, no doubt that Narhan is meant.

7. Chirend now callad Chiránd.

9. Júínah. There is no parganah of this name. I suspect the real reading is Chausah (چوسه for چوبنه), which, according to Grant who calls it "Choseh," was transferred to Sarkár Gorakhpúr at some time between 1750 and 1765 A. D.

10. Digsí is for Dhangsí, a mistake of dots only.

14. Kashmír is now called, and has apparently been always called Kasmar; the substitution of the better known name of the mountain kingdom which Akbar was then in process of absorbing into the Empire is a characteristic touch of the politics of the time.

15. Mángjhí, now, and probably always, Mánjhí. It is difficult to account by any phonetic process for the presence of the گ.

16. Manḍhal now Maṛhal which is the same word under a slightly different pronunciation (मंडल or मढ़ल).

VI. Sarkár Tirhut.

74 mahals. Measured area 2,66,464 b. 3 b. 1,91,89,777½ dáms.
Castes various. 700 horse. 80,000 foot.

1.	Ahispúr.	4,880 b.	3,02,550 d.
2.	Utarkhanḍ.	2,068 b.	1,28,412 d.
3.	Ahilwár.	1,001 b. 1 b.	62,212 d.
4.	Ubhí.	60,000 d.	
5.	Ughárá.	836 b. 15 b.	53,980 d.
6.	Aṭháís.	559 b. 17 b.	34,356 d.
7.	to 10. Basrí and others.	4 mahals	11,25,000 d.
11.	Bharwárah.	16,176 b.	9,42,000 d.
12.	Nánpúr.	40,347 b.	8,94,792 d.
13.	Barel.	6,185 b.	7,89,858 d.
14.	Píprá.	1,823 b. 18 b.	1,12,591 d.
15.	Paḍrí.	9,048 b.	5,54,258 d.
16.	Basotrá.	8,864 b.	5,46,627 d.
17.	Pachhí.	5,816 b.	3,61,960 d.
18.	Bahnur.	5,033 b.	2,897,773½ d.
19.	Bachhnur.	4,956 b.	275,185 d.

20.	Pachhim Bhigo.	4,095 b.	271,826 d.
21.	Bagḍá.	3,716 b.	267,862½ d.
22.	Púrnb Bhigo.	3,022 b. 17 b.	2,22,280 d.
23.	Pandrájah.	3,135 b. 4 b.	195,837½ d.
24.	Bádí Bhúsáḍí.	2,823 b.	1,75,585 d.
25.	Bhálá.	2,840 b.	1,25,437 d.
26.	Bhadwár.	2,087 b.	130,471½ d.
27.	Parihárpúr.	1,968 b.	121,067½ d.
28.	Bahádurpúr.	1,936 b. 12 b.	11?,305 d.
29.	Baraí.	1,455 b. 12 b.	90,369½ d.
30.	Parihár Rágho.	1,303 b. 17 b.	81,605 d.
31.	Bhaurá.	1,170 b. 9 b.	69,608 d.
32.	Pulwárah	1,060 b. 4 b.	65,627 d.
33.	Búrá.	875 b. 15 b.	55,757 d.
34.	Banwá.		40,539 d.
35.	Parihárpúr Jabdí.	6,040 b. 14 b.	37,736 d.
36.	Pengí.	505 b. 5 b.	31,550 d.
37.	Búchháwár.	188 b. 10 b.	12,875 d.
38.	Barsáni.	200 b. 18 b.	12,695 d.
39.	Taráni.	7,171 b.	443,242 d.
40.	Tilok Cháwand.	2,211 b. 7 b.	149,896 d.
41.	Tájpúr.	1,351 b. 14 b.	85,434 d.
42.	Ṭánḍah.	1,038 b. 4 b.	63,768 d.
43.	Tarson.	980 b. 4 b.	61,180 d.
44.	Tirhut Haveli.	21,397 b.	1,307,706 d.
45.	Jákhar.	17,140 b.	1,068,020 d.
46.	Jaráil.	8,297 b.	515,732 d.
47.	Chakmaní.	5,173 b.	321,326 d.
48.	Jakhalpúr.	3,092 b.	196,020 d.
49.	Jabdi.		54,025 d.
50.	Dharaur.	3,165 b.	159,052 d.
51.	Darbhangá.	2,038 b.	202,818 d.
52.	Rám Cháwand.	7,409 b.	470,005½ d.
53.	Sareshṭá.	15,474 b.	941,010 d.
54.	Salímpúr.	458 b. 14 b.	29,094 d.
55.	Salimábad.	44 b. 15 b.	4,184 d.
56.	Sanjauli Tadrá.	2,450 b.	150,843½ d.
57.	'Alápúr.	8,796 b.	442,466 d.
58.	Faḳírábád.	1,170 b. 6 b.	72,355 d.
59.	Kahnauli.	4,644 b.	408,804 d.
60.	Garh Cháwanḍ.	5,510 b.	349,480½ d.
61.	Kodá Khand.	3,888 b.	243,677 d.

62.	Korádí.			9,000 d.
63.	Khandá.	330 b.	6 b.	21,443 d.
64.	Laḍwárí.	2,609 b.		142,495 d.
65.	Mahilá.	15,295 b.		942,048 d.
66.	Morwah.	8,289 b.		515,485 d.
67.	Mahend.	1,077 b.	12 b.	66,693 d.
68.	Narangá.	632 b.	18 b.	39,022 d.
69.	Malhní.	151 b.	1 b.	9,728 d.
70.	Noram.			288,140 d.
71.	Nautan.	3,381 b.	7. b.	209,153 d.
72.	Háthí.	2,563 b.	18 b.	159,790½ d.
73.	Hirní.	796 b.	17 b.	50,342 d.
74.	Háví.	3,665 b.	8 b.	230,700 d.

It would be a mistake to infer from the very great number of parganahs it contains that this Sarkár is larger than the others in this Subah. In fact it covers less area than Sarkárs Bihár or Múngír; the parganahs of which it is composed are in many instances very small, so small that they can hardly be shown on a map of moderate dimensions. I have had to indicate some of them by numbers. The Sarkár is one of the most difficult to reconstruct of any outside Bengal, many changes have taken place both in the names and arrangement of the parganahs and there are large areas absolutely unaccounted for. In dealing with tracts lying north of the Ganges we have always to take into consideration the fact that the extent of the *tarái* or submontane forest varies at different points in the most capricious manner, in some places stretching far down to the south and being apparently omitted from Akbar's census, while at others parganahs are mentioned which lie close up under the hills and are now included in Nepal. Of the 74 mahals comprised in this Sarkár some are not to be found at all in the present day, while on the other hand there are several modern parganahs, some of them very large, which are not mentioned in the Ain. It is probable, in fact almost certain, that the older and now untraceable mahals are represented by these modern parganahs, but which modern name corresponds to which ancient name is a mystery I have not been able to solve either by enquiry on the spot or by any other means. During the greater part of the period lying between our own day and Akbar's, Tirhut has been under the rule of the great house of Darbhangá, and it was probably by the successive Rájas that the changes were made which appear to have obliterated so many of the old fiscal divisions. I am, however, informed by good authority that even the Kánúngo's papers do not contain any record of these changes. It seems therefore hopeless to attempt any

further elucidation. Such facts, and more or less probable conjectures, as I have been able to arrive at are included in the following notes. The mahals not mentioned are still extant under their old names, though it is of course quite uncertain whether their present area is the same as their former; in all probability, it is not.

4. Ubhí. No parganah of this name. The most probable conjecture, though it is no more than that, is that for اوبهي we should read اوڈهي Oṭhi. This is said to have been the local name for the country lying on the extreme east of the Sarkár, north of the two vast and undefined parganahs of Pharkiya and Chhaí of Sarkár Múngír; and now included in parganah Nisankhpúr Kora. The tradition is however a very vague one.

6. Aṭháis. Not found, and probably now known by some other name.

7 to 10. Basrí wa ghairah. Not found. I hazard the suggestion that we have under this name the present parganah of Nárí dígar on the north-east frontier of the Sarkár بسري may be a copyist's error for ناري and the Persian *dígar* is a commonly used equivalent for the Arabic *ghair*. This parganah is not otherwise traceable; but I do not attach much importance to the suggestion.

14. Piprá is a copyist's error for Babrá.

18. Bahnúr. There are several parganahs the names of which closely resemble each other, especially when written in Persian, such as Bahnúr, Bhanwar, Bhaur, Bhúrá, all of which would be written بهنور or بهور and in the Shikastah or even in the Naskh-ta'lík hand would easily be confounded. It appears that owing to this cause the names have been entered more than once, as *all* the mahals so named cannot be traced.

32. Pulwárá not found.

33. See remark on No. 18 above.

37. Búchháwar now Bachaur.

38. Barsáni, properly Parsáni. It is not now a parganah but merely a village in Babrá, the residence of the Rájás of Turki.

42. Tándah, not found.

44. Tirhut Haveli. This is the strangest entry of all. There is now no parganah called Tirhut, and there seems good reason for believing that there never was one so called. Tirhut (Sanskr. Tírabhukti) is the old name of the whole stretch of country from the Gandak to the Kosi, there is no evidence to shew that the name was ever restricted to a single mahal. Nor is there locally any tradition of there ever having been a Haveli Tirhut. The only two Havelis in the modern Tirhut region are those of Darbhanga and Hájipore. The latter is as we have seen duly recognized in the Aín, the former, however, appears merely as

a mahal without the addition of Haveli. It could only have acquired this title after the Rájás had moved their residence to that place from Bhawárá, an event which did not happen till 1762.

Although, however, there is not, and probably never was, a mahal called Tirhut, there is a very large parganah named Tirsaṭh ترسڑھ, which occupies the centre of western Tirhut, just as Darbhanga does that of eastern. It seems more than probable that Todar Mal or his informant was misled by the similarity between the two words and wrote ترهت ترسڑھ. The point is, however, an obscure one.

53. Sareshtá not found. Possibly a copyist's error, by which mahal Suresa of Sarkár Hajipúr has been repeated. Or it may be that a portion of that mahal was included in Sarkár Tirhut. There is a large tract of country opposite to Suresa on the Tirhut side of the Burh Gandak unaccounted for. It now bears the name of Kasmí, but this name does not occur in the Aín.

55. Salímabád. This very small mahal containing only one village is included in parganah Háví.

56. Sanjauli Tadra, not found.

58. Fakírábád, this is now written Fakhrábád فخرآباد.

61. Kodá Khand. There is no parganah of this name, but I suspect that parganah Kab Khand is meant. The tract included in this parganah is surrounded on all sides by mahals of the Aín and it must therefore have been inhabited and assessed. The origin of the name is unknown to me, but if Kab = Kavi 'poet' it may have been equally correctly written Kav which would account for a spelling کووا changed by a copyist's error into کودا.

62. Korádí, an unmeasured mahal and probably not actually in the possession of the Muhammadans as it lies far to the north reaching to the base of the Himalayas and is now in Nepalese territory. I have merely underlined the name in the map as in the case of Pundág and other outlying regions in Sarkár Bihár. The ancient city of Janakpur, the capital of Mithila, is in this parganah.

70. Noram. There is no mahal of this name. It is evidently a copyist's error for Loánw (نورم for لوام) लोघाम् and लोघांव being equivalent. The origin of the name is not known to me, but it seems to point back to Lokagráma, Lohagráma or some such name. If it were not almost too far to the east to come within the area of the Ráma and Sítá legend I should think of Lavagráma from the name of Rám's son.

VII. Sarkár Ruhtás.

18 mahals. 473,340 b. 15 b. 40,819,493 d. Castes various. 4,550 horse. 162,000 foot.

1.	Álrah.	53,516 b. 16 b.	30,281,000 d.
2.	Bhojpúr.	66,078 b. 17 b.	4,903,310 d.
3.	Píro.		3,407,840 d.
4.	Panwár.	22,733 b. 3 b.	1,677,000 d.
5.	Bargánw.	10,540 b. 17 b.	842,400 d.
6.	Jaund.	45,251 b. 3 b.	4,440,360 d.
7.	Jídar.	26,538 b. 16 b.	1,634,110 d.
8.	Danwár.	29,154 b. 4 b.	6,076,520 d.
9.	Dínár.		350,000 d.
10.	Ruhtás Haveli.	34,330 b. 19 b.	2,258,620 d.
11.	Ratanpúr. Has a strong fort.		783,425 d.
12.	Sirsí.	44,710 b. 3 b.	2,769,466 d.
13.	Sahasránw.	31,220 b. 18 b.	2,370,790 d.
14.	Fathpúr Bihíá.	50,474 b. 15 b.	3,736,040 d.
15.	Kotrá.	29,168 b. 15 b.	18,293,200 d.
16.	Kot. Has a stone fort.		847,920 d.
17.	Mangror.		924,000 d.
18.	Nannor.	26,921 b.	2,000,000 d.

This Sarkár is in the main conterminous with the modern district of Shahábád being bounded on the north by the Ganges, on the east by the Son, on the west by the ill-omened Karamnásá and on the south by the Kaimúr range, though in this direction it is impossible to say exactly how far it may have been held to extend in Akbar's time. The hold of the Muhammadans on this district must have been at all times somewhat precarious owing to the turbulence and independence of the Rájás of Bhojpúr. Dalpat Singh the Rájá in Akbar's days appears to have spent his time alternately in durance and in rebellion. A great deal of this Sarkár was doubtless in the words of Mr. Sarristahdár Grant "unsubdued "and probably unexplored as held by independant or refractory zamin- "dárs, though valued by information and entered on the public records of the exchequer."*

In the settlement made under Aurangzeb in A. D. 1685 it was broken up, as stated above, into two Sarkárs of which Rohtás contained 7 and the new Sarkár of Bhojpúr, or Shahábád (a name which apparently occurs for the first time at this period) contained 11.

* Grant's Analysis. Fifth Report, p. 508.

Though in general comprised within the boundaries above mentioned the territory of this Sarkár breaks out in a curious way at one or two points. Mahal Fathpúr Bihiá includes the Doábá or tongue of land between the Ganges and Ghogra rivers which should geographically belong to Sarkár Gházipúr of Subah Ilahábád; but on the other hand mahal Chaunsá which from its position should form a portion of this Sarkár is given to Gházipúr.* In the present day this irregularity has been rectified, Chaunsá now belongs to Shahábád, and the Doábá to Gházipúr or strictly speaking to the recently formed district of Baliá in the North West Provinces.

Again in the south-east the parganas of Síris and Kutumba which should by their position on the right bank of the Son, belong to Sarkár Bihár are attached to this Sarkár. Probably as lying within sight of the lofty fortified plateau of Rohtás they were more easily managed from there, than from the distant town of Bihár. (See No. 7 below.)

In the south-west also the parganah of Mangror lies beyond, that is, to the west of the Karamnásá and should belong to Gházipúr. It is now included in the district of Mirzapúr in the N. W. Provinces.

There is not much difficulty in reconstructing this Sarkár.

1. Álrah is evidently a mistake of the copyist for Árah or Arrah the present capital of the district.

5. Baṛgánw, a copyist's error for Bárahgánw, a still extant parganah at the extreme north-east corner of the Sarkár comprising most of the alluvial formations and islands at the junction of the Ganges and Son rivers.

6. Jaunḍ. Should be Chaund. In the present day the name is usually written Chánd, and the area of this parganah is included in the modern one of Chainpúr. The name Chaunḍ is identical with Cháwand borne by several mahals in Sarkár Tirhut and is derived from Chámunḍá चामुण्डा, a name of Durgá, who according to a local legend destroyed a demon at this place.

7. Jídar. Should be Haidar (حیدر), and probably indicates the country on the right bank of the Son opposite Rohtás. There is a large fort called Haidargaṛh still extant in that region. It is now in parganah Jhapla. This parganah, together with Bilaunjah to the south-west, was assigned by Sháh Jahán along with Siris, and several others, for the maintenance of the garrison of Rohtás, and down to the time of British rule was included in that Sarkár.

11. Ratanpúr, this mahal together with Kot (No. 16) and Mangror (No. 17) comprised the district of Bijaygaṛh which passed into the possession of the Maharaja of Benares prior to British rule. We may

* See Elliot's Races of N. W. P. vol. ii, p. 115.

probably therefore identify the "strong fort" mentioned in the Aín, with the well known hill-fort of Bijaygaṛh on a high plateau overlooking the Son. No place or tract bearing the name of Ratanpúr seems to exist in the present day.

12. Sírsí, now called Síris, a parganah in the Gya district on the right bank of the Son. It appears to have included also the modern parganah of Kutumbá which in Grant's Analysis is coupled with Siris in one zamindari, and included in Sarkár Rohtás.*

13. Sahasránw, now vulgo Sasseram, the home and burial-place of Sher Sháh, and his son.

15. Koṭrá appears to be the parganah now called Rámgaṛh, the village of Koṭrá is still extant in that parganah.

16. Kot. See remarks on No. 11. The fort of Kot appears to be that called Naugaṛh.

17. Mangror, now in the Mirzapúr district. I have treated this mahal together with Kot and Ratanpúr as being beyond the actual limit of Muhammadan possessions and have indicated them in the map by a coloured line under the name.

In conclusion, it will be seen that the reconstruction of this Subah is far from being complete. Here, as in the case of Subah Avadh, I would express a hope that persons living on the spot may be able to clear up some, if not all, of the doubtful points, by local enquiry.

* Fifth report, p. 515.

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VOL. LIV.

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THE PHILOLOGICAL SECRETARY.

"It will flourish, if naturalists, chemists, antiquaries, philologers, and men of science in different parts of *Asia*, will commit their observations to writing, and send them to the Asiatic Society at Calcutta. It will languish, if such communications shall be long intermitted ; and it will die away, if they shall entriely cease." SIR WM. JONES.

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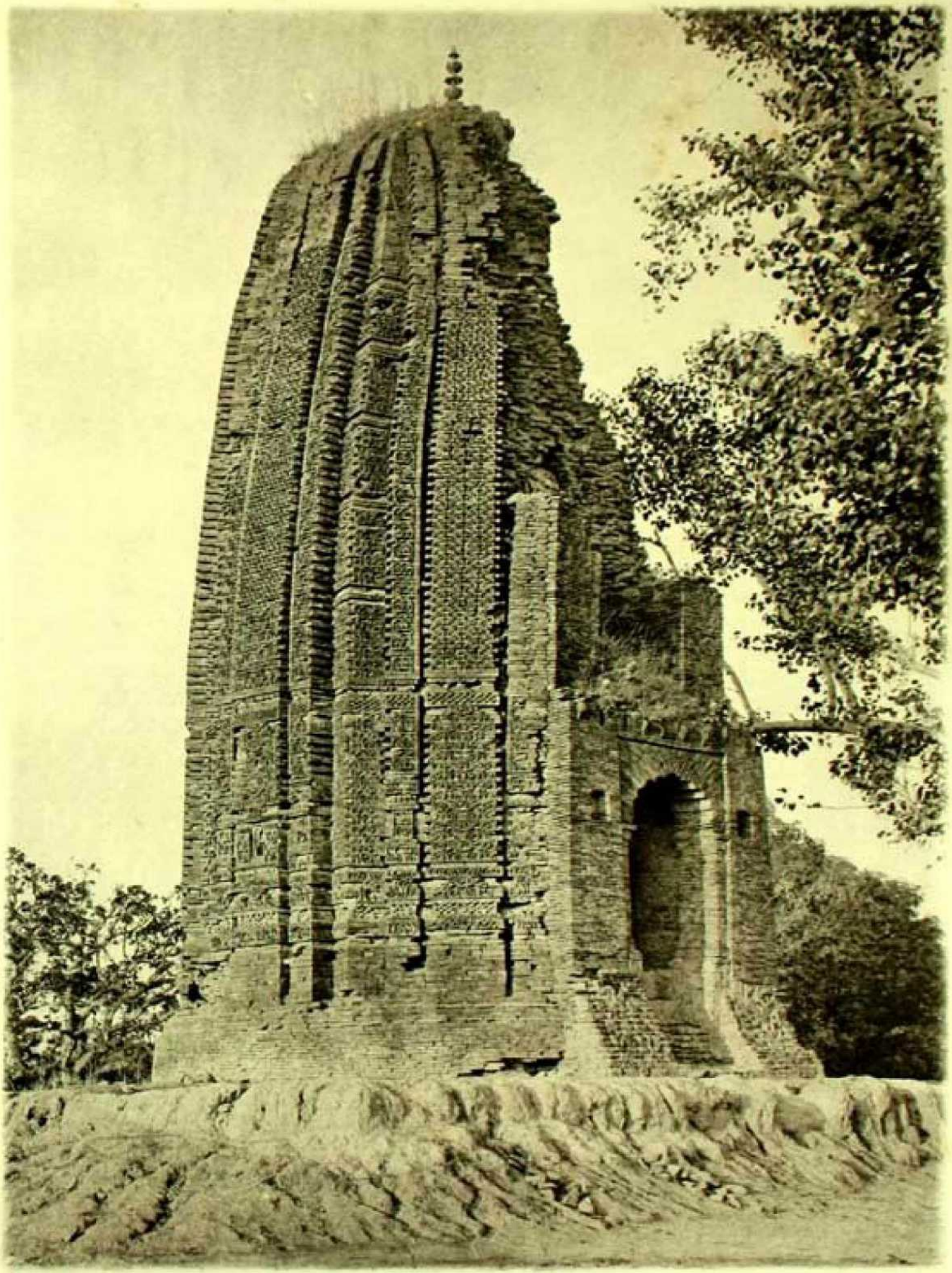

From a Photograph by A. Baldwin.

TEMPLE AT TINDULI, FATEHPUR DISTRICT, N. W. P.

JOURNAL

OF THE

ASIATIC SOCIETY OF BENGAL.

Part I.—HISTORY, LITERATURE, &c.

SPECIAL No. 1884.

Translation to Manbodh's Haribans.—By G. A. Grierson.

As promised when laying the text of this interesting Maithil poem before the Society,[1] I now offer a translation of it.

This was the more necessary, as the text is very difficult, there being many passages which even Maithil paṇḍits have been unable to interpret satisfactorily. I have done my best to give a clear rendering of the whole, and have added notes where requisite.

As the poem contains a large number of words and forms not mentioned in any extant dictionary or grammar, I have added an *index vocabulorum*, which will I hope prove useful.

In the introduction to the text I stated that the author had no issue. I have since ascertained that he had a daughter from whom the present Mahárájdarbhangá is descended.

Book I.

I reverence[2] the feet of the daughter of the Himálaya,[3] through whose power poets can describe the three worlds. I also[4] have made my

[1] See J. A. S. B. Part I for 1882, p. 129.

[2] प्रणमौं *or* प्रणवौं, old Mth. for प्रनमौ; = Skr. प्रणमामि, 'I reverence.' For similar forms in a still older stage, *cf.* विनमओ and समदओ in Vid. LXXVIII, 2, 5. Here the termination ओ is simply another way of writing यौं, so that विनमओ is for विनमयौं = Ap. Pr. विणमउं = Skr. विनमामि.

[3] Párvatí, i. e., Deví.

[4] हमउं means 'I also,' अहमपि.

mind a[1] great one (in order to undertake so great a subject, for) Krishṇa's birth and marriage are no small (subject to attempt). How can it be accomplished (by me), for now it seemeth unapproachable, unfathomable. If it ever is completed, may it be done well; for of this, also, I have a doubt that (my treatment) may not be (worthy of the subject). (5) Owing to this fear I continually perform[2] auspicious ceremonies, and lay my heart upon the lotus of Hari's feet.

The Earth became distressed with the burden (of sin which she bore); and, taking the form of a cow, went to Indra's paradise, but thence she derived no (assistance) from any one. Then all the gods went with her and told (their tale) to Brahmá, but from him, also, their hopes were unfulfilled,[3] so Brahmá, closely followed by the Earth, went before them. (10) They all approached the shore of the sea of milk, and with folded hands, assuming the attitude of contemplation, saw the grove of the Kalpa tree, and the jewelled abode, and Lakshmí and Náráyaṇa in proper form. (Brahmá), whose seat is on the lotus, first commenced to address[4] (Vishṇu), and then the Earth came forward. Weak with her load (of sin), her body trembling, her eyes hidden with tears as she spake, gazing upon Hari she began to address him as follows, " I shall

[1] गोट idiomatically gives the force of the indefinite. गोट usually means 'only.' Thus बन में चड़इं बज्जत छल परन्तु हमरा कौआ गोट दिष्ट गोचर भेल, 'there were many birds in the forest, but the crow *only* became visible to me,' एक गोट (contr. एगो), दुइ गोट (contr. दुगो), '*only* one,' '*only* two,' &c. जै गोट, '*only* as many as,' गोट गोट, 'one by one.' बड़ गोट thus means primarily, 'only great,' and hence 'a great.' Similarly एगो is often used as an indefinite article to mean 'a,' thus एगो चड़इं, '*a* bird.' गोग can only be used with certain words. Thus, छोट गोट 'a little' is never used. The word टा has the same meaning as गोट, and can often be substituted for it.

[2] करिअ and धरिअ are shortened forms of करिऐ and धरिऐ, common in poetry, *viz.*, the 1st sing. present conjunctive in its original sense of the present indicative.

[3] Lit. 'Their desires remained in the same state.'

[4] कहबाँ लागु is old Mth. for कहै लागु, began to say. Both कहै and कहबाँ are oblique forms of verbal nouns. Both forms are used by Manbodh. कहै is oblique of कहि; M. always spells it कहइ; it is for Ap. Pr. कहिहे or कहहे, Mg. Pr. कहीए, gen. of कही = Skr. कथा, gen. कथायाः. कहबाँ is oblique of कहब; it is for Ap. Pr. कहिव्वहं, Mg. Pr. कहिअव्वाहँ the gen. plur. (used for sing.) of Ap. Pr. कहिव्वं, Mg. Pr. कहिअव्वं, Skr. *कथितव्यं (gen. plur. *कथितव्यानां). The modern obl. form कहबा (see Gram. § 189) is either the same as कहबाँ with loss of the anunásika, or derived from the Ap. Pr. gen. sing. कहिव्वहो, Mg. Pr. कहिअव्वाह, Skr. *कथितव्यस्य.

again be plunged into the infernal regions. (15) Every Asura who hath fought a battle with the Immortals hath now been born with full array of attendants. Who can describe the weight of horses, elephants and weapons, of mountains and of groves? I make a vow that to-day I withdraw from my name of all supporting.[1] Lord of the lordless! Thou who bearest a conch shell in thine hand, know me who have come to thee for refuge, and grant me thy protection." He whose essence is pity, became pitiful, and consoled her in many ways. (20) "O Earth, have patience for but a little while; I will become incarnate, and take away all thy burden. In Mathurá dwell[2] Devakí and Vasudeva. In their abode will I take my birth." On hearing these words the ears of all became satisfied[3] and Śrí Bhagavat faded from their vision. They also consulted[4] for a space, concerning[5] how many and who of them should take human birth. Indra determined to become incarnate in portion as Arjuna, and Váyu as Prince Bhíma Sena.[6] (25) (One said) you will consider Yudhishṭhira, as the incarnation of Dharma, and Nakula and Sahadeva as those of the two Aświns.

After taking Hari's permission this was the result of their deliberations, and the immortals departed for Amarávatí. Then the Lord of the universe thought of Yoga Nidrá, and He who beareth the conch-shell summoned her, "Go, thou," he said, "forthwith to Hell, and fetch six babes of the Dánavas. One by one shalt thou place them as corpses[7] in Devakí's womb, for such is the destiny of these six. (30) Her seventh child shalt thou withdraw from her womb, and shalt deposit it within that of Rohiṇí. I, the Man of Ages, supremely generous, will become incarnate in that babe as Haladhara. I myself will also become incarnate as Devakí's eighth babe; as it shall be necessary,[8] so will I bring it to pass.

[1] सर्वसहाए may mean either 'All-Helper,' *i. e.*, Vishṇu, or 'she who bears' or 'supports everything,' *i. e.*, the Earth. बाज is Persian باز.

[2] In बस, the termination of the 3 non-hon. pres. is dropped, as frequently occurs in poetry.

[3] जुड़ाएल्ल,—this word is not given in Bate in this sense.

[4] गमथैनि = परामर्श, विचार; the word is not given in Bate.

[5] जँ is instr. sg. of जे who. It is governed by परि. जँ परि means 'how'.

[6] The reading of B., भौमसैन, shows the vulgar spelling of the name in Mithilá. The word is so spelt in the Song of Salhes.

[7] सव्व is altered from सव (Skr. शव, a corpse), so as to rhyme with भविनव्व. The meaning is that these children being killed immediately after birth were practically still-born.

[8] बनत, (3 fut. sg. of √ बन) *lit.* 'as it shall be done,' hence here 'as it shall be necessary.'

Thou shalt thyself take birth in the abode of Yaśodá, and Vasudeva shall exchange me for thee. Hearing thy wailing, so many of the guards as shall be there, shall awake and tell Kaṃśa, (of the birth). (35) Kaṃśa shall come and lift thee up, and dash thee violently upon a stone. Thou shalt fly away from him to the skies and after saying these words, thy home shall be in Indra's abode. 'Wherefore, O Kaṃśa, didst thou dash 'me down? He hath been born who shall cause thy death. Shame[1] on this 'pitiless conduct of thine, on the morrow shalt thou gain its fitting 'fruit'." Man'bodh saith, "This should have been told subsequently, and I have said it too early in my tale in narrating the above."

End of Book I.

Book II.

Nárada the saint, the son of Brahmá[2] whose seat is on the lotus, and the friend of Śiva, was much beloved of Śrí Bhagavat. He, skilled in strife,[3] having heard all like a parrot,[4] came, and smilingly slandered[5] what had occurred on the border of the milky sea. "O Kaṃśa, he who will be the eighth child of Devakí will be thy fate. (5) Remember, Kaṃśa the heavenly voice; thy day hath approached.[6]" When Kaṃśa heard this he stood up and grasped his sword, and (O Śiva, Śiva!) the life of Devakí fell into misfortunes.[7] Saith Kaṃśa, very cruelly[8] "doth any one keep a thorny[9] tree in his own court-yard?" With hands clasped Vasudeva made supplication, "Let her live,[10] but take the child; a son is more of a mother's breath than her life, who in the world doth not

[1] दुर दुर, used as an interjection meaning 'fie, fie.' It is generally used in hunting away a dog. Hence its applicability to Kaṃśa.

[2] Nárada sprang from Brahmá's forehead.

[3] One of his epithets is कलिकारक, 'strife-maker.'

[4] That is to say, he obeyed the order to narrate what had occurred, and did so word by word like a parrot.

[5] √ टुस or टुसि दे means 'to back-bite,' 'to slander.' This sense is not given in Bate.

[6] √ तुलाग्रल चान, 'to approach,' not in Bate.
गाढ़ = difficulties. The sentence is *lit.* 'difficulties fell upon D.'s life.'

[8] निरवन्ह, a difficult word to translate here. A man without parents or children cares nothing for his relations, and hence is capable of acting cruelly towards them.

[9] कटगर = thorny, derived from काँट, 'a thorn,' the vowel being shortened in the antepenultimate.

[10] जिवप्र for जिवे *see* note [4] to P. 2, with reference to the inserted व, see Gram. § 189, add.

know this; (10) but if thou doubt her (on this account) at the time of the birth of the child, yea, bind her and cast her into prison." Kaṃśa did as Vasudeva recommended, for who can wipe out what is written of his fate? He to whom the Creator was evil-disposed understood (the counsel to be right), set guards (on Devakí) and so was secure. He gave instruction to the governor of the prison, and six infants became subject to death: with regard to the seventh a report spread of a miscarriage, but that child was conveyed to the lap of Rohiṇí.

(15) Then Yoga Nidrá struck them with some of her enchantment, and, like men drunk, the guards fell asleep upon the earth. Remembering the eighth day of the dark half of the month Bhádõ, at night, the Great Lord came and was born. In his (four) hands he bare the discus, club, lotus, and conch; Devakí's soul was filled with grief[1] as she gazed upon him. She saith to Vasudeva with hands humbly clasped, "Kaṃśa is a tiger, and we are like a lame hind". (To Kṛishṇa she saith) "Give up, I pray,[2] thy four-armed form, if not Nárada will[3] assuredly incite[4] Kaṃśa to some evil deed."[5] (20) The Friend of the poor, the Lord of the lordless gave heed unto her words, and remained with two hands. When the Great Lord took birth, so thick a darkness spread, and so fierce a rain-storm began, that the very points of the compass were forgotten; animals and birds themselves lost all sense of direction. If you were to attempt to sew with a threaded needle, on merely touching it you would be sure to prick yourself[6] and nothing more. The heavens thundered, and the clouds poured forth water, and therefore the Lord of serpents (Seshа) spread his hood (over Kṛishṇa to shelter him). (25) Great was the courage of Vasudeva as he succeeded in conveying Hari to Gokula. To whom shall[7] I tell of the joy of

[1] Bate's भंकना, 'to be struck with horror.'

[2] हलु is said to be the Skr. खलु. This would be the regular Prákṛit form of the word, but is not found in literature, the usual forms being क्खु (Vara. IX, 6) or खु (Hem. II, 198): खलु, however, itself occurs in Prákṛit (*e. g.*, Bhagavatí, p. 266), so that हलु is quite a possible formation.

[3] गछ is the old form of गड the sign of the future, see Gram. § § 133, 120.

[4] √लार *lit.* 'stir up,' hence, 'incite,' *cf.* लाड़नि, 'a pottage stirrer.' The word is not in Bate.

[5] उकठी = उपद्रव, not in Bate.

[6] *Lit.* If, having taken a needle, you were to (try to) pierce anything, and to thread the thread, if you were to touch it with your hand, then it would catch only in your hand (*i. e.*, prick you). बेधिच, गाँथिच, and छुविच, are for बेधिऐ &c., 2, hon. pres. conj., *cf.* page 2, note [2]. हाथहिं is emphatic for हाथ.

[7] गछ is sign of the future, see note [3] above.

that moment! Even so impassable a river as the Yamuná became fordable. Yaśodá slept overpowered by Yoga Nidrá; and as she slept[1] by night the babes were changed. The one,—a girl —, was taken from her and (Devakí) sent her to Kaṃśa and what[2] she said (to him) has been (already) told (by me).[3]

When Kaṃśa heard the story told by Nárada the saint, his soul flew from him (in terror). (30) He called there his maidservant,—very vicious[4] was the witch Putaná. Gazing round upon the countenances of all, he cried 'Slay all the babes ye find, spare not one; seize them, and seize them, and dash them upon the stones, but see and be careful that they fly not from your hands into the skies.[5] If any infant show signs of being very fearless,[6] ye shall certainly[7] twist his throat."[8] All of them said, "we will do all this,—whatever, my lord, you may desire. Tremble not."[9] (35) His attendants all gave a howl, as Kaṃśa went to the prison, and unbound Devaki and Vasudeva, saying, "Do not ye blame me, but your fate. He who will trouble me hath been born elsewhere;[10] to no purpose, have I cut off your progeny. I am full of shame, and cannot even look ye in face; who is he who can seize and imprison his sister and her spouse? Pardon me, I have been guilty of a great impropriety," saying these words Kaṃśa departed to his sleeping room.

(40) When Yaśodá's sleep broke, she rejoiced like a beggar who hath stolen jewels and wealth, while the bosom of her husband Nanda could not contain its joy, as tears of gladness overflowed his eyes. As soon as it was dawn, there rose cries (of joy) in the town; who can describe the gladness of that hour! The cowherdesses passed over each other's heads oil and vermilion, and here and there put handfuls on each other.[11]

[1] सुतलिहिं is loc. of सूतलि, fem. of सूतल, past participle of √ सूत.

[2] Regarding the टा in जेटा, see note [1], page 2.

[3] See I, 37.

[4] बगलह, derived from बागि, 'fire,' means 'inflammatory,' hence 'vicious. The word is not given in Bate.

[5] Kaṃśa is warning them after his own experience with Yaśodá's daughter, which, imagining to be Devakí's eighth child he had dashed upon the washerman's stone, and which had escaped from him and flown to the skies, as prophesied by Vishṇu in I, 35. The description of this incident is omitted in the poem.

[6] पकसीठ = ढीठ, 'fearless,' not in Bate.

[7] बरबधि, *lit.* 'having commenced,' is used to mean 'certainly.'

[8] ठोंठ, 'throat,' not in Bate in this sense.

[9] साहेब is the Ar. صاحب. जनु is a prohibitive particle, used only in the sense of the Imperative. Here the past tense indicative is used exceptionally in the sense of the Imperat., for the sake of rhyme.

[10] *i. e.*, Kaṃśa was under the impression that Kṛishṇa was Yaśodá's child.

[11] चरि = चलि, 'going here and there.' चुर, 'a handful of oil and vermilion.'

There is no lack of anything where the greatness of Hari (is manifest); even the very vermilion covered them up to their knees. (45) some in the court-yard, and some in the outer doorway, in many places did the cow-herds dance the dance of Ḍoms.[1] They sang the *Sohar*,[2] and showed their joy, as dancing they went forward and dancing they returned. After dancing and rejoicing[3] in this manner, each one returned to his own house.

One day Yaśodá was aweary, and slept with Hari pressed to her heart. Having learned that Nanda's wife was asleep,[4] Putaná arrived, (50) and gliding about, hastened into the house, seated herself and gave Kṛishṇa poisoned milk to drink. Hari drank the milk greedily till his belly was full, and as he did so sucked out of her with it her life-blood.[5] She screamed[6] an inarticulate yell of agony, and fell, howling,[7] like a severed[8] tree. All who were awake saw what they thought was a *tál* palm with a little pitcher hanging to it.[9] Then having read some charm or other,[10] Nanda kissed Hari, blessed him, and lifted him to his heart.

[1] डोमकइ, *lit.* 'a Ḍom's waist-cloth' (काइ), hence 'after the manner of Ḍoms.' In Bihár, on occasions of births, marriages, &c. it is customary to employ Ḍoms and their women to dance, as a sign of joy. काइ is a particular way of tying up the waist-cloth so that movements may not be impeded. डोमकइ may be freely translated as 'tucking up their petticoats like Ḍoms.'

[2] सोहर, 'a congratulatory birth-song,' for an example, see Harkh'náth's songs in Maithil Chr., No. 11.

[3] नाच काइ, dancing &c. काइ, See note [1] above.

[4] सुतला, is almost certainly incorrect for सूतलि. In MS. A., the word has been accidentally destroyed.

[5] Lit. 'with her blood her life.'

[6] √ बड़रा, means 'to talk nonsense,' hence, 'to talk loudly and inarticulately.' Bate gives बरडाना, 'to talk in one's sleep, or in delirium.'

[7] बड़राइ = Hindí चरी कर, 'having screamed.'

[8] कटला, is the oblique form of कटल 'cut,' agreeing with तरु which is in the genitive case (postposition omitted) governed by जक.

[9] A लबनी is the small earthen pitcher hung at the top of a *tál* or toddy palm to collect the juice.

[10] कीदञ. Lit. 'something or other.' The affix दञ or दीं is added to interrogative pronouns to give the idea of indefiniteness. In the present poem, it also occurs with के (V. 58, *cf.* Bid. XIII, 2), कि (IX, 44), की (कीदीं, IX, 9), and कोन (IX, 35). दञ I derive from the Skr. इदृशः in ईदृशः, 'like this,' कीदृशः, 'like what,' &c. ॰दृशः can become in Prákṛit ॰दिसो Lassen, p. 115, *cf.* Vara. III, 4. Hemachandra, II, 80). In Apabhraṃśa Prákṛit, we find the form केञ for कीदृशः (H. C. IV, 402) arising through the forms *कदिञ, *कदञ (*cf.* Lassen, p. 455); and the termination

(55) One day it happened that Yaśodá laid him in a corner[1] (under) a waggon, and put him to sleep. Being extremely occupied, she went away somewhere on some business, (and forgot all about him). Thus lay the Great Lord, in such discomfort gazing and prying about the waggon. The Refuge of the refugeless kicked up his feet, and overturned the waggon. Who was there who had strength (sufficient) to prop it up (against him)? All the ropes[2] were broken, and all the component parts[3] of the waggon were knocked to pieces. (60) Hearing the crash the great people (of the place) ran up, unable to tell who could have upset the waggon,[4] but the children said "We can take our oath; he[5] (Hari) has upset it, we have seen it with our own eyes," "O mother, mother"[6] cried Yaśodá, as she picked up her child, "a miracle has happened." Saith Man'bodh "Hari found an opportunity, and displayed an infinitesimal portion of his might."

End of Book II.

Book III.

When some days had passed, Hari soon began to be able to use hands and feet.[7] What place was there, where he did not go? How often did he go outside[8] the court-yard of the house. Gleefully used Madam Yaśodá to laugh, as she ever and again caught him up and brought him back from the outer doorway. How often did he attempt to catch snakes (thinking them pieces of rope), how often did he eat lime mistaking[9] it for curds! (5) Cleverly he used to beat people and run away[10] and

of the missing form कदिञ्ज, from which केञ्ज must have descended, appears to have been preserved in the Maithil दञ्ज.

[1] दोग means 'corner,' not in Bate,—a pure Mth. word.

[2] बाँक = टाँक = 'string', 'rope.'

[3] चकटवकट = चालीबाली, = 'worthless things', 'unconsidered trifles'; hence, here, the minor pieces which, put together, go to make up a cart.

[4] *Lit.* 'not having said who had overturned the waggon.' के is for कें, the sign of the accusative, and not the interrogative pronoun.

[5] हिन = हूँ, the oblique form used exceptionally, before a transitive verb in the past tense, instead of the nominative.

[6] An exclamation of astonishment, like the familiar *Báp re Báp*, 'O Father, Father!'

[7] हथगर, 'able to use his hands.' गोड़गर, 'able to use his feet.'

[8] बह राथि in the text is a misprint for बहराथि.

[9] √ बद, 'think, imagine.'

[10] चाल चलब, 'to go.'

thus he became the worry of her life. How often did she snatch fire out of his hand! and how often did he burn[1] (his fingers), when she was not looking![2] At length she said to him, "you must learn from me.[3] If you break your legs[4] I shall have no one left to me". Saying this she tied him up to a (heavy) mortar, and added, "My son, if you run away now, you won't be able to go fast."[5] Then, feeling quite safe about him (she went away), and Hari seized his opportunity, and, taking the mortar in his arms rolled it away;[6] (10) Rolling[7] and bouncing[8] it goes, to where the two huge trees[9] were. The Lord of the lotus dexterously tore up the two Arjunas[10] without touching them with his hand. The great trees

[1] पकलाइ, *lit.* 'cooked himself.'

[2] *Lit.* 'without looking.' बीनु is for बिनु, 'without,' तकला is the oblique form of ताकल, verbal noun of √ ताक, 'look.'

[3] हमरहि ताहि is old Mth. for हमरा सँ. हमरहि is oblique of हमर. हमर is the Ap. Pr. possessive pronoun ऋम्हार (H. C. IV, 434). The termination हि may be the Ap. Pr. locative termination हि, but this is unlikely. It is probably a weakened form of the Ap. Pr. termination of the Genitive of fem. nouns, हे (H. Ch. IV 350, Kramadiśwara. 35). It will be observed that हमरहि here is feminine. Compare Bid. LI, 6, where there is a similar fem. obl. form परहि, or, with the genitive affix, परहिक. The masculine form of परहि would be परह which occurs in the old Hindí of Chand (28, 62). गोचार परह चारै सु गोइ, 'the herdsman tends the cows of another' (Hoernle, Gd. Gr., p. 206); this, as Hoernle clearly shows, is derived from the Ap. masculine genitive परह or परहो. It is of course unnecessary to do more than point out here the now established fact, that the Bihárí oblique form is the direct descendant of the Prákrit genitive; postpositions like ताहि (Skr. तरिते (?) Hoernle, Gd. Gr., p. 226), or सँ (Pr. सुन्तो), being merely verbal nouns governing the genitive.

[4] टाङ in the text is a misprint for टाँग.

[5] *Lit.* '(I will see) then (how) you run away crawling' जाउ पराइ, for पराइ जाऊ, 'you may run away,' जाऊ being 2. plur. pres. conjunctive. √ रिङ occurs also in Skr. (रिङ्गति) 'to crawl (like a child).' In modern Maithilí it is more usual in the form √ रेंग. There is also in the Mágadhí dialect of Bihárí, a word रेंगा, 'a boy.'

[6] √ ओड़नाव, = 'roll away.' Not in Bate.

[7] √ गुड़क = 'roll.' Not in Bate.

[8] √ भिड़ुक = 'bounce.' Not in Bate.

[9] अकाइ, Skr, अतिकाय, Prákrit अइकाय, *lit.* having a vast body'. In Mth. it is used to mean 'huge,' 'vast,' 'dense.' *E. g.* अकाइ बन, 'a dense forest.'

[10] The two Arjuna trees *(terminalia alata glabra)*, were two sons of Kuvera, who were cursed by Nárada to assume the forms of trees until liberated by Krishna. Krishna dexterously uprooted them by hitching the mortar across the two, and giving it a sudden jerk. They then assumed their proper forms.

fell, and the crash[1] made (his power) manifest in the world. Hearing the crash Nanda leaving his cows, ran up, (saying) "let them rather be put in the pound (than that I should stay here). What tree has fallen? There is no storm[2] nor (even) a shower,[3] I am perhaps ruined to-day."[4] (15) Seeing the court-yard empty, her eyes filled with tears, and Yaśodá lost all life and power,[5] "what reward has come to me after watching so much? I do not see either the mortar or the rope." Immediately[6] afterwards she ran up, like a milch cow who has lost[7] her calf. She untied[8] Hari's bonds, and pressing him to her heart, displayed the utmost affection and trust in him. She covered him with the corner of her garment, and carried him into the house, where[9] her eyes poured forth water like rain-clouds. (20) She kissed his face, and gave him suck, and rejoiced with all her friends.

Saith Man'bodh, of my own knowledge, have I described the meditations of Bâla Govinda.

End of Book III.

Book IV.

One day Nanda Jí's troubles of mind increased, as he stood before the Lady Yaśodá: for he feared that some calamity would befall his country of Gokula, so he summoned all his neighbours and sat silent.[10] "Night and day on all sides is there fear of wolves,[11] and through them

[1] घघात *for* घाघात.

[2] बिहारि, 'a storm.' Not in Bate.

[3] झाँट, 'a shower.' Not in Bate.

[4] *Lit.*—'To-day there are twelve roads (into) my castle,' a common Maithil expression. A castle with several gates is easily captured.

[5] *Lit.* 'lost her heart and hand.'

[6] लगले is the loc. sing of लागल, 'the act of joining,' the verb-noun of √ लाग. Hence it is in this form commonly used adverbially, 'on the joining,' *i. e.*, 'immediately.'

[7] हरैनें for हरैलें, instr. of हेराएल, verb. noun of √ हेरा(य), 'to lose.' Lit. 'On account of losing her calf.' In modern Maithilí this change of ल to न (as in लेनें जाएब for लेलें जाएब) is considered vulgar. There is a village in Madhubaní called लखनौर, which is called by the common people नखनौर.

[8] √ फी is the common word in Maithilí meaning to 'unfasten,' 'untie.'

[9] तह, 'there.'

[10] मुक, *adj.* 'silent,' not in Bate.

[11] Other legends make the wolves specially created by Krishna in order to compel his foster-father to leave Gokula.

the people of the village are losing all their wealth[1]. Do ye all meet and consult together in a *panch*, for attacks are[2] being continually made upon us. (5) It is now no longer proper that we should dwell here. Arise[3] and settle near Vṛindávana. There one sees the mountain Govardhana,[4] even gazing on it is right for cowherds[5] (much more living near it). Next day all arose together[6] like Gypsies[7] they departed in a moment. This (new) city became more beautiful than that one, and it rose (glorious) as Ayodhyá.[8]

So Hari became seven years of age and never ceased sporting.[9] (10) Sometimes[10] he danceth, and sometimes singeth songs. An age used to pass in even making him eat.[11]

One day Nanda called the two brothers Hari and Haladhara to himself, and said "Bráhmaṇs study books, and Kshattriyas archery, but cowherds[12] learn cattle-tending from their boyhood."[13] They whom Indra

[1] क, in हतखीक, is added for the sake of rhyme.

[2] Note the forms लगइहि, होइहि, (हो० in text is a misprint for हो०), which are common contractions for लगैचहि, and होइचहि. These forms have not been noted in the grammar: other instances will be found (फिरइहि, रहइहि) in Bid. LXXVI, 8; but Bid. only uses these in the feminine. This, however, is not the case in Manbodh, or in the modern language, *e. g.* होइहि above is masculine. In common writing at the present day, these forms are continually written without the final इ, thus, लगइह, होइह, which is due to the extremely feeble way in which a final इ is pronounced. See Gram. § 7.

[3] √ उपट, (not in Bate), = 'be rooted up,' hence, 'to arise;' compare Parable of the Prodigal Son in Grammar, हम उपटि कै अपना बापक लग जाउब, 'I will arise and go to my father.' It is derived from the Skr. √ उत्पट (*उत्पटति) 'to be rooted up.' In Skr., this verb is only used in the causal form (उत्पाटयति) 'he roots up.' √ पट, however, forms पटति

[4] Which means 'cattle-increasing.'

[5] बूझ, here means उचित, 'proper.' ग्वारा is oblique of ग्वार, 'a Goálá;' हि, in ताकहि, is emphatic.

[6] सपटि means 'together.'

[7] बखो is a kind of wandering tribe of hunters. See the word in the Vocabulary to my Mth. Chrestomathy.

[8] The city of Harichandra was Ayodhyá.

[9] *Lit.* 'was there any time at which he had no time for sport?'

[10] The obl. form कछु of कोचो is rare.

[11] *Lit.*, '(If) he will eat, a whole *kalpa* (*lit.* the destruction at the end of a *kalpa*) passes away.' The meaning is that he could not be enticed away from play even to his meals.

[12] In the text अहीर = Skr. अभीर.

[13] नेंदहि, obl. of नेंदा a boy. The usual form of the word is नेना. In Mth.

(the Lord of the Gods), Brahmá and Siva serve, to them did Nanda make over the care of tending cattle. Hari and Haladhar were both delighted, and taking their calves went to Vṛindávana. (15) Heavenly damsels became incarnate (as cowherdesses) in Gokula, who though they had fortune and many relations cared nothing for them.[1] Only Kṛishṇa pleases them all; the homes of the mothers-in-law and sisters-in-law, only make them angry. No one attends to the remonstrances of any person, all their hearts[2] were directed to Kṛishṇa only.

One day when Kṛishṇa was with his companions he came to a pool in the Yamuná, and when he saw it he considered to himself, "this is where the snake Káli is invincible."[3] (20) Now, no beast or bird ever drank the water of that pool, knowing that it was like[4] poison. The trees and herbs on the bank were all burnt up, but the flame of the fire (which burned them) was (a flame) of poison.[5] "To-day (thought Krishṇa), will I settle this affair and therefore I should not sit idle. Let me haste and enter the water." Saying this he ascended the *kadamb*[6] tree and tightened his waist cloth, and closing his two eyes, Murári leaped. He smacked[7] his arms against his body as a challenge, and hearing the sound thereof, the snake issued forth. (25) In mighty wrath he hastened out, and whirling round kept encircling (Kṛishṇa) for an hour.[8] Rising

after a long vowel, a nasal alone is considered as equivalent to the compound of anunásika and the 3rd consonant of any class. Examples are बेङ or बेंग 'a frog;' भाण or भाँड़, 'a vessel;' नेना or नेंदा 'a boy;' आम or आँब, a mango.' Compare in the case of aspirates, कान्ह or काँध, 'a shoulder;' बान्ह or बाँध, 'a tying;' तेन्हर or तेँभर, 'thither.'

The derivation of नेना or नेंदा, 'a boy,' is doubtful.

[1] *Lit.* 'though they had wealth and relations, they were satiated with them.' बड़े for बड़ occurs also in l. 29, and also in (B.) 2, 1. I am unable to account for the form. In 9, 16, when the line is repeated, the form is बड़ो. अहि गरहि in the text should be अहिगरहि. The √ अहिगर means 'be satiated;' not in Bate.

[2] मनऊ न कहि सेँ in the text should be divided मन ऊनकहि सेँ. √ अट means literally 'be stopped,' hence, as here, 'be attracted.'

[3] दुरवार = दुर्निवार, 'that which cannot be warded off.'

[4] बत in बिखबत is the Skr. वत् 'like.'

[5] Here in बिखहिक, हि is the termination of the general oblique form.

[6] This was the only tree existing on the banks of the pool. It had been preserved from destruction by the accidental fall of a drop of ambrosia upon it from Garuda's beak.

[7] बाँहि बजारब is the smacking of the arms against the chest, which wrestlers indulge in before the combat. दाप is the Skr. दर्पः, Mg. Pr. दप्पे. √ बजार is not in Bate.

[8] *I. e.*, his length was so great, that it took an hour to do it.

high as a mountain, the snake hissed, (while there stood Kṛishṇa) alone without family or retainers. (The snake) bound up[1] (Kṛishṇa's) body and accomplished his object. He performed wondrous actions, and seized Kṛishṇa with his teeth. (As they sank, so vast was their size that) the (waters in the) pool of the Yamuná (rose, and it) became filled to the brim.[2] In the water nothing but serpent[3] could be seen. For a space Kṛishṇa became greatly[4] distressed, and the king of serpents displayed great insolence. (30) Seeing this his companions ran, and collected[5] a crowd in the village. Nanda, Yaśodá, and Balaráma ran, not a crow's son[6] remained in the village. Full of anxiety they arrived at a run, and Yaśodá threw herself down and rolled upon the earth, while, with fixed eyes, Nanda gazed upon his son, breathless and voiceless like a picture. One cowherdess, weighing the matter in her mind, and remembering one or two instances of Kṛishṇa's might, said. (35) "He who beareth the conch-shell in his hand, is clever in (preserving) his life" and not the least speck of the beauty of her face was dimmed.[7] Another said, "the day without the sun, the night without the moon, and Vraja without Hari,—these three are all alike. He who returns to Vraja without Dámodara,[8] shame, shame be upon his father and his mother. Let us all throw ourselves[9] into the pool of the Yamuná. It were happier for us that the serpent ate us than this (that we should desert Hari)." Of what was to be done,[10] no one knew anything, and for an instant the bank of the river[11] became filled with cries.[12] (40) Haladhara's soul became filled with anguish, and seeing this, Hari's eyes became blood-shot through rage. He remembered[13] his might, and acted like himself.[14] He violently opened

[1] गै here, and गै कङ in l. 30, are irregular indecl. participles of √ जा, 'go.' The form is used only after the past tense of another verb, and beyond emphasizing the meaning of that other verb, has no other force. √ साध, *lit.* 'accomplish.'

[2] चापचाप, 'filled to the brim.' Not in Bate.

[3] सापहि साप, *lit.*, 'serpent on serpent.' सापहि is an old locative.

[4] बड़े, this word occurs more than once. It occurs in 4.15, and 2, 1 (text note ††)

[5] गै कङ, see note [1], above.

[6] A common idiom for saying that not a soul remained.

[7] मलानि, fem. of मलान (Skr. म्लान).

[8] *I. e.* Kṛishṇa.

[9] *Lit.* 'fall.'

[10] कर फ्रक in the text should be करफ्रक, gen. sing. of करि the verbal noun of √ कर.

[11] कड़रा, 'the high bluff of a river.'

[12] कड़रा, see note [7] page 7.

[13] चेताचोनि, 'memory.' Not in Bate.

[14] बानी, means, 'custom,' 'habit.' The sentence is literally 'took his own habit.'

his bonds and fetters, and a terribly unequal[1] battle took place in the water.[2] He was a man, but of what avail[3] was his valour? There were a hundred serpents there, how many could he seize? (Yet) conquering he stood upon the middle[4] snake, and fixed his feet as firmly as a thunderbolt. (45) Nanda and his family saw this with joy, and for a short space they (saw) a *nách* gratis.[5] As (Kṛishṇa) danced (upon the snakes) he so pounded them that from every hood the blood flowed (in torrents). The mass of blood flowed away at once, and the Yamuná ceased to be that river and became the Saraswatí.[6] The serpent's wife humbly speaks a word, "O, thou who bearest the conch-shell in thine hand, grant me my husband as a gift. It is forbidden to slay[7] one who hath taken refuge with thee. In his ignorance,[8] a great sin hath been (committed by my husband). (50) How great is the difference[9] between the mighty Lord of great power and pride, and a miserable evil-minded serpent." Hearing this Hari became gracious, and Káli Nága began to address him. "Pardon, pardon, Lord of Lakshmí, my sin. Fully[10] have I committed a fault. Seize not me who have taken refuge with thee. I have now no poison. Give me an order and I will perform it. In fear of Garuḍa I live in this place. I go nowhere, and bear great sorrows." (Kṛishṇa then said to him), (55) "when Garuḍa shall see (the marks of) my feet (upon thy head) he shall forget his enmity, and count thee as his friend. Now no longer canst thou live[11] here, with thy family[12] go thou to the Ocean." After saluting (Kṛishṇa) thereupon all the snakes of that pool, as many (in fact) as were in the Yamuná, departed. With his family he went to the Ocean, and then that pool became pleasant.

[1] **बिरुद्ध जुद्ध** is an unequally matched battle, as opposed to **न्याय जुद्ध**, in which the parties are equally matched.

[2] **जलहि**, loc. of **जल**.

[3] *Lit.* 'how much valour could he perform.'

[4] **मझिलहि** is oblique of **माझिल**.

[5] **बिनु कौड़िक**, *lit.* 'without cowries,' hence 'free of expense,' 'gratis.'

[6] **छुटलि**, *lit.* 'escaped'. The water of the Saraswatí is red.

[7] **बधबै** is long form of **बध**, 'slaughter.'

[8] **जननें** for **जनलें**, see note [7] page 10. **जनलें** is the instr. (governed by **बिनु**) of **जानल**, the verbal noun of √ **जान**, 'know.'

[9] *Lit.* 'where is the great Lord, and where the snake,' *cf.* the Skr. use of the particle **का**.

[10] **भरि पोख**, 'fully,' **पोख** literally = **पोरख**.

[11] **निबाह**, 'a means of livelihood,' 'profession.'

[12] **भित्य** = **परिवार**, 'family.'

Nanda and Yaśodá considered in their minds that (this escape of Kṛishṇa) was as if he had been born (again) that day.[1]

(60) He who shall read or hear (the tale of) the subduing of Káli, will count a hundred Yamas[2] as but a straw. All his life he will rejoice with a wealth and relations,[3] and after final death will dwell in Vaikuṇṭha.[4] Saith Man'bodh, "all became full of joy, and departed singing and dancing."

End of Book IV.

Book V.

One day Hari and Haladhara, the two brothers, went with the children to a grove of *tál* palms. The fragrance of the *táls* came to them, and the mouths of all became dripping[5] with water. Some (tried) staves[6] and some (tried) clods, but the *tál* fruit fell not,—the only thing that fell was the saliva[7] from their mouths. Seeing this the lotus-eyed one laughed, and Haladhara seized and shook one of the trees.

(5) Before[8] this the demon Dhenuka had settled to come there, and under the form of an ass was keeping guard over the *tál* grove. Hearing (the boys cry) "Catch, Catch," he became exceeding wroth, and came up braying and kicking.[9] Coming near he aimed[10] a terrible kick, and like a demon[11] attacked Haladhara. Haladhara seized him by the hind-legs, and whirling him violently round, struck him again and again against the *tál* tree. From Haladhara did that wicked being obtain the excellent fruit (of salvation), and became assimilated[12] with his deified progenitors. (10) Kṛishṇa himself seized two or three (of the demon's fellow-asses), and, having done so, used them as missiles for knocking down the *tál* fruit. Then all ate the *tál* fruits together, and each brought a load home to his own court-yard.

[1] *I. e.* They had considered him as good as dead, and had come to life again.

[2] Yama, the god of death.

[3] धन जन, see note to l. 15.

[4] The हिं in बैकुण्ठहिं is the sign of the loc.

[5] √ झा = √ चू = 'drip.' Not in Bate.

[6] झटहा is a kind of staff used for throwing into a tree for knocking down the fruit. Not in Bate.

[7] सेप = 'saliva.' Not in Bate.

[8] पहिनहिं = पहिलहिं, the loc. of पहिल, 'first.'

[9] धनही, 'an animal's hind legs.' Not in Bate.

[10] √ हल, 'strike with violence.' Not in Bate.

[11] बलाइ, = 'a demon': *lit.* 'a misfortune.'

[12] √ मिझरा, 'be mixed.' Not in Bate.

One day there was an excellent game in Vraja, called *Ṭĕlawá ṭĕlaï*.[1] The conditions of losing and winning in this game were that the losers were to carry the winners on their shoulders. Hearing this, the demon Pralamba came violently,[2] and deceitfully played the game with vigour. (15) With (apparent) difficulty[3] he lifted (Haladhara on to his shoulders), and went off with him for a distance of ten *kaṭhás*. Then he increased in size, and became very great.[4] Haladhara struck him, and called out,[5] "Kṛishṇa, Kṛishṇa he is carrying me off."[6] Hari replied, "O Haladhara, keep up your courage, how can an old man ever be deceived?[7] Who is there such that he can carry you, Sir,[8] off? In a moment or two, your Honour will make (this demon) happy." Then Haladhara understood his own might, and slew[9] Pralamba with a single blow of his fist. (20) Seeing this, all the cowherds ran up, and in loud tones[10] praised Balarámа.

A short time after this, the season for the worship of Indra arrived. Then Kṛishṇa asked all the elders, "Why are you all of foolish mind?" When Nanda told him that it was the worship of Indra, the Spring of Happiness broke all (their counsels). "Cast from your hearts the worship of Surapati. That is for those who cultivate fields.[11] (25) What doth the caste of cowherds in worshipping the god. With love and faith they should worship the excellent hill (of Govardhana). When a mountain is wroth he causeth devastation, and, by means of[12] tigers and lions, he causeth wounds." Twice (or thrice) did Kṛishṇa say these words persistently,[13] and hearing his words they gave up the worship of Indra.[14] Uniting together they prepared food[15] of various kinds, and

[1] The game according to the Bhágavata was guessing the names of flowers.

[2] धम्म दै, 'forcibly.' Not in Bate.

[3] He was of course only a boy, like the others, in appearance.

[4] वड़ैह = वड़, = *cf.* वैह for थी in 1, 29.

[5] √ गोहार, 'call out.' The sentence is literally, 'struck, and having called out, began (to strike).'

[6] हरनै॰ = हरलें, instr. of हरल, 'the act of carrying off.'

[7] Kṛishṇa mockingly alludes to the fact that Balarámа was his elder brother.

[8] फ़ुँहा, is an old form of थहाँ, 'your honour.'

[9] √ जुझ is *lit.* 'fight.' Here, it means 'conquer.'

[10] गलबल, = कोलाहल, 'a confused noise. Not in Bate.

[11] *Lit.* to whom there is cultivation. खेती बाड़ि, is the usual word in Mth. for cultivation.

[12] धरि, here used as a preposition, 'by means of.'

[13] *Lit.*, 'having become thirsty' the phrase has idiomatically the meaning given in the text.

[14] *Lit.*, the worship of Indra remained (unaccomplished),' a frequent use of the √ रह.

[15] न्योज is 'food offered to a deity.'

went to worship the mountain of Govardhana.[1] Then Kṛishṇa took an incarnate form (as the god of the mountain) and laughing descended[2] from it. (30) He ate all the offerings which he could get,—and having finished his meal blessed them saying "*Subhamastu.*" Giving them a blessing, he disappeared, and with (the boy) Kṛishṇa they all returned to their court-yards. When Surapati (Indra) heard of the interruption to his sacrifice, he rose with his limbs blazing with fire. "Hath a human being the presumption[3] to interrupt even my business?" Then he called his clouds and told them all to go to Gokula. (35) "Hail, Lightning, and Ceaseless Rain, cut[4] ye off the creation of cowherds from the earth." Samvartaka, the king of clouds, made obeisance, and hastened proudly away. An army of fifty-six times ten million clouds[5] departed, and the fire of thunder[6] burst forth. Whirling round and round the clouds surrounded Gokula, as a falcon swoops down[7] on and covers a quail. How shall I describe the overshadowing of that rainy-season? It was not less than (the crash at the) general destruction of the universe.

(40) Cowherdesses, and cowherds, she buffaloes, calves, and cows, fainted[8] from the cold. From the hail, and the pitiless strokes of the lightning, many turned round and fell dead on the spot. Crying, "save me, Kṛishṇa. I can find no refuge for my feet," they approached him. He, at whose name all difficulties[9] disappear, himself stood there. The earth became struck with drops of vermilion from the damsels' hair, and their lovely veils became torn. (45) When Kṛishṇa saw Rádhá and the others coming to him (in this state) his eyes became filled with tears. He threw off his human form, and tore up the mountain of Govardhana. When Hari seized the excellent mountain and held it up as an umbrella, all Gokula became relieved from terror. "Let no one remain (outside," cried he) "from fear that the mountain will fall; let all come[10] near it."

[1] पूजल is direct for obl. पुजला, or पूजै.

[2] *Lit.* 'his feet flowed down from the mountain.'

[3] सोखौ = Pers. شوخی.

[4] खलोप = लोप, with pleonastic initial ख. The word is a common one in Mth.

[5] मेघौ, for मेघवा, the long form of मेघ, 'a cloud.'

[6] ठनका ठनक, 'thunder.' ठनका is an old obl. form of ठनक, like मारा in मारामारि, or like हमरा the obl. of हमार.

[7] *Lit.*, 'having swooped covers'.

[8] √ ठिठुरा, 'to become senseless from cold.' The word is not used in Mth., for any other kind of fainting. Not in Bate. *Cf.* 8. 10.

[9] गाढ़, 'a difficulty.'

[10] आनि is here indecl. part. of √ आ, 'come.'

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Saying this, he remained straining himself[1] for seven days with his arms uplifted. (50) Cowherdesses, and cowherds, she buffaloes, calves, and cows, all joyfully went beneath the excellent mountain. The darkness ceased,[2] and the heavenly bodies rose, yet no one knew that the rain had come to an end.[3] For seven days the wind of the storm continued, not a tree or leaf escaped. On the eighth day the clouds disappeared,[4] and after finishing their meal,[5] they all issued forth. Hari laid the hill down where it was before[6] and from that day he was called Giridhara. (55) They all began to praise him saying, "It looks[7] as if some god had become incarnate, (what with the affairs of) Putaná, the trees, and Kálí Nága. In so few days, these great marvels have occurred. Now we have one point of special doubt, when we consider Kṛishṇa's birth to be superhuman. 'Who is he? The incarnation of what divinity?'" Doubting thus were all the cowherds. No one reached the conclusion of his doubts, (as before they could do so) Kṛishṇa threw his charm over them, (and prevented their thinking him a god). (60) He who hears attentively the tale of Govardhana, crosseth the ocean of existence, and goeth to the abode of Hari. All his difficulties immediately vanish, and, saith Man'bodh, he getteth[8] eternal happiness.

END OF BOOK V.

BOOK VI.

It was an autumn moon, and a clear night, and seeing them Hari became inflamed[9] with love. The Lady Rádhá, and Padminí also, came together bringing flowers.[10] In Vṛindávana they had the *Rása* dance, and there they stayed day and night. Between each pair of cowherdesses was there a Murári, and between each pair of Kṛishṇas, was there a damsel. (5) In this manner was formed the circle of the *Rása*, and some there are who say that in that night a whole œon passed. Hari delighted greatly in the pleasures of this dance, and (therefore) the Asuras inter-

[1] जीउ जातब (or जाँतब) 'to strain one's breath,' 'to act violently.'

[2] *Cf.* note on √ रह in line 27.

[3] ओति, 'end,' 'cessation.'

[4] *Lit.* 'went down into the earth.'

[5] आहर, = आहार.

[6] ठामहिं old. loc. of ठाम.

[7] √ लाग, means frequently 'appear,' 'seem,' used impersonally.

[8] *Lit.* 'plunders eternal happiness.'

[9] माति, indecl. part. of √ मात, 'be intoxicated.'

[10] Read सङ्ग फल काँ लाएलि.

rupted it. A bull with his whole body covered with cowdung and urine[1] came along harassing[2] the cows on his way by his violence. With closed eyes he runneth about in ten directions, his shoulders and hump high as a mountain. Such a bull no one could oppose;[3] when they saw him every one was seized with trembling. (10) With a roar as of a lion he threatened Hari, and began to throw up earth behind him. He shook[4] his horns, with closed eyes, but Kṛishṇa caught him by the horn and struck him. Seizing him, Hari struck him with all his force and exhausted him, and hit him with his knee exactly on[5] the belly. He tore out his left horn, and with it hit him, and felled him to the ground. The dead bull became a blessing, (for by his death) the earth began to be relieved of its burden.

(15) Nárada the saint has only this duty, to engender[6] strife, and to encourage the enemies' side. One day he went to Kaṃsa's court-yard, and told him by degrees all (that had happened). How the guards had become intoxicated and gone to sleep, and Vasudeva had exchanged the infants. (He told him) all that Hari had done from the day of his birth,—the subduing of Káli, and the upholding of Govardhana. To all (the Asuras) he said, "Make some device, for your enemy is waxing stronger day by day. (20) It clearly appears[7] that some day he will destroy[8] you; that boy will become the destroyer of your house." King Kaṃsa began to say "From long ago I have had this fear.[9] Ho, my Henchman, thou art my brother, haste and call[10] Keśí. He alone[11] honoureth my cherishing, above all doth my hope increase in him." Thereupon Keśí arrived and boasted[12] of his might; saying, (25) "To-morrow will[13] I destroy the cowsheds (of Vraja)," he departed. Then

[1] गोंत, = गोमूत्र. Not in Bate.

[2] Read सतबितहि, which is irregular old loc. of सतबैत, pres. part. of √ सताव, 'harass,' 'oppress.' The Bhojpúrí pres. part. would be सतावित, *loc.* सतबितहि.

[3] दापि (*sc.* सके)

[4] √ झड़क, 'shake.'

[5] *Lit.* 'looking at,' a common idiom in Maithilí.

[6] Oblique of लगाऊब, in sense of genitive, see note [4], page 2.

[7] झकझक, 'clearly.' Not in Bate. √ सूझ is here used in a neuter impersonal sense.

[8] √ खो is here, irregularly, used in a causal sense.

[9] दुगदुग = डर, 'fear.' Not in Bate.

[10] देखि (a Bhojpúrí form), 2 imperat. sing. of √ दे.

[11] डिल, *Lit.* 'form,' hence, 'person.' = Hindí डील.

[12] √ बड़रा, here = 'boast.'

[13] ब्रै sign of future, see note [3], page 5.

Kaṃsá called Akrúra, and explained the whole affair from beginning to end. "All the Yádavas will I drive away[1] except thee. The two children will I kill and take a fine[2] from Nanda. I will confiscate[3] all his cows and she-buffaloes, and plunder all Vraja of all the wealth I can find in it. Then will I take my revenge, and slay the evil-minded Ugrasena, and Vasudeva. (30) With your permission, will I enjoy my kingdom. (Therefore) do thou to-day perform the task I wish (thee to undertake). I will behave[4] to thee as if thou wert my brother, and at dawn will divide the land and give thee half. I purpose to proclaim on all sides, a 'Sacrifice of the Bow,' hasten to invite them, and return to me. Ráma and Kṛishṇa the sons of Vasudeva esteem no one, on account of the strength of their own arms. I have two wrestlers, Chánura and Mushṭi, who will look upon them as mere straws, and slay them on the instant. (35) I have a famous Elephant named Kuvalaya Píḍa, which if it choose can destroy[5] the chariot of the Sun. They are but men, and how much prowess can they show. They are young, and in[6] an instant will die. I have heard that when Indra sent his clouds, Kṛishṇa upheld the mountain, that he eats buffalo curds, milk, *ghí*, and *khír*, and that he is prospering[7] every day. Mount thy chariot and set off at once, (and mind that) what is pleasing to me is that thou should'st bring mine enemy here." (40) When the assembly arose, only[8] a few remained behind, and Akrúra was delayed as[9] it was too late to start. (So) for that day Dánapati (Akrúra) remained there, and agreed[10] to all that Kaṃśa said. He began to perform so (wicked an) action, because, on account of his faith he knew somewhat of the future. When he agreed, Akrúra laughed, and became full of joy at the prospect of gazing upon Kṛishṇa. (He sang) "Blessed, blessed, am I, blessed is my lot; blessed is my tongue, and blessed my love (to Kṛishṇa). (45) He who became incarnate to protect[11] the Vedas, whose work it is to support the earth. He who became incarnate

[1] √ खेद = √ भगाव. Kṛishṇa, it is hardly necessary to remind the reader, was a Yádava.

[2] डाँड़ि = दण्ड.

[3] सरकार लगाइब, 'to declare to be Government property,' 'to confiscate.'

[4] परिपाटि, 'behaviour.'

[5] √ मोड़, *Lit.* 'twist.' Not in Bate.

[6] मध, = Skr. मध्ये, 'in.'

[7] बढ़नुक, *lit.* 'one who is to prosper,' hence here, 'one who prospers.'

[8] बत, *lit.* 'like.' Compare the Hindí थोड़ा सा.

[9] लेखे, *lit.*, 'for,' hence, 'on account of.'

[10] अङ्गिरि लेब, 'to agree' = स्वीकार करब = अंगिकार करब (v. 43).

[11] उधार = रक्षा.

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and rent the pillar,[1] with him shall I hold converse. He who taking the form of a dwarf deceived Bali, with him shall I hold converse. He whom[2] the Kshatriya race fear, he who caused to fall[3] the pride of Rávaṇa." Saith Man'bodh, "If I were to describe the joy of Akrúra, twelve years would pass by (in doing so)."

END OF BOOK VI.

BOOK VII.

One day there arose a cry[4] in Gokula, "a creature in the form of a horse hath come with open[5] mouth.' Quickly, quickly, he licked his lips with his tongue, and crashing cut the earth with his hoof.[6] As many forms (as an Asura can take), he assumed, and caught hold[7] of several cowherds by the leg.

He cried, "You may pray to Rudra, but I will eat the S'údra,"[8] and yet, in spite of this the horse did not leap while the goat did.[9] (5) All the cowherds cried out, "Save us, Kṛishṇa, preserve those who have come to thee for refuge." With long strides[10] Kṛishṇa ran to the front, and Keśí began to challenge him. Opening[11] a mouth so wide as to show his very heart,[12] his teeth appeared like spadefuls[13] of white (earth). He

[1] Prahláda.

[2] Paraśu Ráma.

[3] √ ढाह, 'cause to fall.'

[4] हौअ = हौरा = कोलाहल. There is a Hindí verb हौआना, 'to scream.'

[5] बौअ = 'open.' Not in Bate.

[6] खूरै is old instrumental for खूरें.

[7] √ झीक, 'catch hold of.' Not in Bate.

[8] This phrase is a proverb. It refers to a legend about a Bráhmaṇ who rested for the night in a place full of ghosts. When they came to attack him he began to do *pújá* to Rudra (S'iva), thus saving himself, but not his S'údra servant who was with him. The ghosts cried out to him 'You may pray to Rudra (and thus save yourself) but you will not save your servant from being devoured by us.' Here the Asura is represented as saying to Krishṇa, 'You may save yourself, but you cannot save your devotees.'

[9] Another proverb. A horse, of course, leaps better than a goat, and when he is beaten by the latter, there is something wrong. Here the meaning is that Kṛishṇa, who corresponds to the horse, remained doing nothing, while the Asura (*i. e.*, the goat) went about doing all this destruction.

[10] √ दरबर, 'stride,' 'take long steps.' Not in Bate.

[11] √ बाव or √ बाब 'open.' cf. बौअ in line 1.

[12] सँात, 'heart,' 'entrails.'

[13] कोदरि कट, 'a fragment cut by a mattock.' The word is frequently used for the fragments of white clouds seen in the sky, when the latter is clearing after a storm.

rushed as doth the demon of eclipse when he seeth the sun. Hari (merely) held out one arm before himself, and that (arm) he thrust[1] down the great[2] mountain cavern.[3] By the might of Kṛishṇa that arm swelled, (10) so that the Asura burst down his middle, and for a hundred roods[4] around, the earth was overspread with blood. (In each half), was one eye, one ear, and one leg. He fell into two exact halves, as this virtuous poet relateth. As Kṛishṇa had touched a dead Asura (he became unclean), and so took some Ganges water to purify himself.

On the back of a cloud was Nárada then riding, and (seeing this) he began to say with modesty, "This is he whom the Asuras fear, and of whom Indra is in terror.[5] They are unable to digest what they eat from this fear. (15) So great an Asura as this he has killed, laughing the while. Now all the desires of the gods have been carried out. Great happiness has been my share, and more will I obtain. The day after to-morrow will I come to (see) the fight with Kaṃśa." Saying this Nárada Muni sowed[6] the seed (of enmity), and at the same time prepared[7] the way for Akrúra.

Akrúra did not stay in Mathurá to eat, and arrived at Gokula as the sun was setting. From a distance he saw Nanda's doorway, and close by a crowd[8] of Gowálas. Amongst them he saw the Well-spring of Happiness, like a full moon surrounded by stars. His golden diadem shone brightly[9], his garments were yellow, and his teeth like the pearls found in an elephant's forehead. Not a fresh lotus, nor an *Aparájitá* flower, nor the blossom of the linseed[10] was equal to him in grace. Close to his diadem were peacock's feathers, whose eyes would put to shame[11] an autumn lotus. From his two ears hung earrings in shape like the *Makara*, and they completed his beauty as happens in the case

[1] *Lit.*, he caused to lie on the ground of the great mountain cavern.

[2] बरि, for बड़ि, fem. of बड़ 'great.'

[3] दरि, 'a cavern.'

[4] A धुर is a square measure of land.

[5] डर, here, means not 'fear,' but 'an object of fear.' √ डरा is active, and means 'fear.' The causal form is √ डराव.

[6] √ बव 'sow.' तिल, *lit.* 'sesamum,' here 'the seed of enmity.'

[7] डोल, 'shape,' 'manner,' 'form,' here, 'preparation.'

[8] बराम = بارعام.

[9] जगमग, compare 6, 1.

[10] अतिसी = तीसी with pleonastic initial अ. *Cf.* अलीप in 5, 35. Or possibly it is a corrupt form of the Skr. अतसी.

[11] *Lit.*, 'make black.'

of S'ukra or Bṛihaspati.[1] (25) The necklace over his breast was a lovely Vaijayantí, there is no such other in existence. If I had a thousand mouths, I might tell of his beauty. If one saw him (but once, ever afterwards) one would think that he continued gazing on him.[2] On seeing him, Akrúra ran up from a distance, and, as he expressed his affection, fell at his feet. Hari pressed him to his bosom with his arms, and smilingly the Lord of Vraja inquired if it was well with him. Haladhara arose and took him to his bosom, and, recognizing him as his devotee, did honour to him. (30) Enquiries after health and happiness especially[3] were not omitted, and then Akrúra made known Kaṃśa's[4] invitation. He who beareth the conch-shell in his hand had arranged[5] all this for the sake of the slaughter of Kaṃśa, and accepted the invitation. Saith he, "Kaṃśa is destined to be slaughtered by me. That will now be within three days."

When the women of Vraja heard of the departure of Kṛishṇa, they all sat down heart-broken. Their hair was unsnooded, and their faces uncovered, and all commenced to make lamentation. (35) "Even in anger he never speaketh a harsh word. He beareth all that we say to him. Yet that Hari he is carrying away from us, his heart is hard as if it had been rubbed with chaff.[6] It appeareth[7] that there is no other so hard-hearted as he, how, then, was he given the name Akrúra (tender-hearted). We have heard that there are there (in Mathurá) peerless damsels, whose very feet are as beautiful as our faces. Like you and we there are many,[8] hence, what idea[9] is there of his returning." (40) Some in their woe, abandoned their ornaments, others moistened (with their tears) their couches of lotus leaves.[10] The flower-garlands which they themselves had woven, on hearing of the departure of Hari, (became dishevelled and) appeared like serpents. Some, broken-hearted, sat mo-

[1] Two planets, Venus and Jupiter, which are supposed to have rings, which, says the poet, complete their beauty, just as the earrings completed Kṛishṇa's.

[2] *I. e.*, This memory would never be effaced.

[3] Read अवसेख न. Concerning the use of रहल, see note [14], p. 16.

[4] क्रित is here used as a sign of the genitive. अविनय = अभिनय.

[5] ब्योंत = उपाय. Bate gives ब्योन्त 'shape,' 'fashion.'

[6] भुसा = भूसा. Articles are rubbed with chaff to give them a hard polished appearance.

[7] फूर = फूटे. √ फूट is often used to mean 'appear' impersonally.

[8] This line is an excellent example of the feminine in Mth.

[9] कोटि, 'an idea' in Mth. Not in Bate in this sense.

[10] *I. e.*, They made cool beds for themselves to allay their fever, but even these they watered with their tears.

tionless,[1] and others said "(let us make) arrangements[2] that he may stay here". Some stood (waiting) in astrologers' courtyards, saying, "If you order me I will tear off my ornaments[3] from my person. I will remain all my life as your menial,[4] if, on his asking you, you will tell (Nanda) that it is an unlucky day."[5] Others said "why does king Nanda agree (to his departure), verily he is a fool,[6] and knoweth nothing." There was a demand for twenty-two hundred poets[7] (to sing in honour of his departure), and the cowherds came up with curds and milk and clarified butter. King Nanda was their *Jeṭh raiyat*, and not one inferior (pot of) curds[8] did they bring. (50) Kṛishṇa (being now engaged on a serious enterprise) gave up all his former love for these things, and made no provision for his journey.[9] At the time of starting he said nothing as to whether he would remain there (at Mathurá) or return. (The cowherdesses said, "We will not believe that he has returned) until we see him with our eyes,[10] 'what is behind one's eyes is behind the house.'"[11] Saying this they stood on the (highest point of a) pile of dried cowdung (watching him) till[12] their Lord had gone more than a *kos*. From one heap they mounted another (as they followed him with their eyes), for how could she who was consumed[13] with the pangs of separation remain motionless? (On account of the tears falling from their eyes and the trampling) the pile became simply a mass of cowdung[14] and their ap-

[1] **सच** = 'motionless.' Not in Bate.

[2] **परिपच**, 'arrangements,' = **बन्दोबस्त**. Not in Bate.

[3] A woman divests herself of all ornaments when her husband dies. Here the women offer to the astrologers to separate themselves from Kṛishṇa's embraces for ever, if that will make him stay near them.

[4] **सुदिनि** fem. of **सूद** a Śúdra: commonly used to mean a menial servant.

[5] **भदवा**, any one of six unlucky asterisms, *viz.*, Śravaṇá, Dhanishṭhá, Śatabhishá, Púrvabhádrapadá, Uttarabhádrapadá, Revatí. Not in Bate.

[6] **गोबर गनेस**, *lit.* 'a cowdung Ganeśa,' means 'a helpless fool.'

[7] **भार** = **भाट**, 'a panegyrist.'

[8] Note that in spite of the grammarians **दधि**, is feminine.—So also in the **दधि लीला** of Súr Dás.

[9] **समदा बारि**, 'viaticum.'

[10] **डीठि** = **दृष्टि**.

[11] A proverb, of which the usual version is **आँखि लेखें पीठि पड़ुआर**, that is to say, what a man cannot see is as good as absent.

[12] **ता** = **तावद्**, 'tell.'

[13] √ **डढ़**, 'burn.'

[14] A gowála's dung-heap is proverbially neat. *Cf.* the Prov. **गोआरक गोबर दुइ दिस चिक्कन**, 'a gowála's dung-heap is smooth on both sides.'

pearance became changed, and became one of tears.[1] (55) Some even went outside the village (to watch him), and others turned pale[2] and went crazy. The horses were very swift, and went like the wind; (soon) they could no longer see the chariots, and it became late in the day. Then it appeared[3] to the hearts of all, as if a precious jewel had fallen from the hand (of each). Saying, "Every damsel of Mathurá who shall see Hari, will rejoice and consider her life's desire fulfilled", (they departed), lamenting, and calling to mind his virtues, (for) without Hari the whole town appeared empty.

(60) Saith Man'bodh, "What sort of day was that?" May such an one as it be for my enemies.

End of Book VII.

Book VIII.

The chariot halted on the banks of the Yamuná, and Akrúra descended and went to bathe. As he dived he saw (an apparition of) Hari and Haladhara in the water, together with Sesha (the serpent of eternity) and was struck with awe.[4] When he made as though he would speak, Hari understood it, and restrained his own voice. He saw Hari and Ráma in the pool of the Yamuná, (yet, when he rose to the surface), he saw them as they were (on the bank). (5) Then Akrúra uttered praises, which are described at length[5] in the (Sanskrit) Haribaṃśa.

Very quickly they crossed the Yamuná, and Akrúra made up his mind firmly (that Kṛishṇa was indeed God). After going[6] a little way the Lord (descended) and went on foot, and Akrúra urged[7] the chariot ahead. Joyfully the two brothers went along, and after some distance they saw the washerman's *ghát*. "O washerman beloved of the king,

[1] This half line, no one, whom I have met, can translate, nor can any trustworthy emendation be suggested. The translation given, suggests that चोरख should be read चो रख, in which case रख would = the Persian ڕەنگ, which in Mth. means 'general appearance,' and is pronounced रङ्ग, not रख. The translation is, however, an unsatisfactory one.

[2] *Lit.*, 'yellow.' This line is another good example of the Mth. feminine.

[3] Past tense of √ भास, 'appear,' the penultimate being shortened for the sake of rhyme.

[4] *Lit.* 'considered it wondrous.'

[5] फैल, Lit., 'that (which) he said is spread out in the Haribaṃśa.'

[6] गए see note [1], p. 13.

[7] √ दल, literally 'strike,' here 'urge.'

give, O friend, a gift of a garment." (10) When the washerman heard this, he arose in anger,[1] and called out to his wife to thrust a torch in (the boys') faces. When Kṛishṇa heard this, (darting on them) like a loosened falcon, he beat the washerman, and plundered the *ghát*. The washerwoman left the place in tears, and as she went along the road rubbed off the vermilion from her head (in token of her widowhood). Hari selected[2] yellow garments, and gave Haladhar dark-coloured ones. The people of the village when they saw the plunder[3] of the washerman's *ghát* laughed, (and said to each other) 'They are playing their old pranks still.[4]

(15) Hari had a great affection for flowers, and saw the house of a garland-maker: He went thither and asked for a garland, and blessed was (the fortune) of the gardener then. Guṇaka the gardener was full of holy virtues, and being possessed of the power of seeing the future, acted accordingly. On seeing Kṛishṇa he gave him flowers, nor asked who he was, and his descendants exist now to the present day.

The two brothers put on the garlands, and gave him this boon, and then entered (Mathurá) the city of the king of men. (20) Kubjá (the hunchback), having anointed her body stood in the way, and when she saw Hari, her body became filled with love. Cried she, "Haste thou, to my house, and fulfil[5] the desire of my life." Kṛishṇa being in the presence of his elder brother was ashamed,[6] and said something by way of excuse.[7] Then going aside he said unto her, "Give[8] me sandal wood; when I return I will come to thy house." Her love overflowed,[9] nor could[10] she say anything. So she gave him sandal, and considered in her heart, (saying to herself), (25) "I am very lean, and ugly, and vile, nevertheless the Lord did not despise me, nor was he displeased[11] with me." Kṛishṇa understood her thoughts and made her straight, and Kubjá being freed (from her infirmity) became (beautiful) as Lakshmí.

[1] √ टिड्ढा, 'be enraged,' *lit.* 'shiver' or 'faint with cold.' See note [8], p. 17.

[2] √ विह, 'select.'

[3] Here लुटि is in its proper meaning of a verbal noun.

[4] *Lit.*, 'That practice (उपलखन) has remained (वसल) till now (एतऊ धरि)'

[5] देह = दव, the 2nd Imperat. of √ दे.

[6] It is not etiquette to carry on intrigues before an elder brother.

[7] उकुति, 'an excuse.'

[8] See note [5] above.

[9] *Lit.*, 'filled.'

[10] √ पार 'be able,' see remarks *s. v.* in the Vocabulary to my Maithil Chrestomathy.

[11] √ रुस, here means 'be displeased with,' *Cf.* note [7], p. 25.

Hari had told her (to supply him with sandal) sufficient for two persons,[1] and Kaṃśa's desire was all that was left in the vessel.[2] Then the Hero of the house of Yadu having anointed[3] his whole body with the sandal, went about the city, seeing (the sights). He saw Kaṃśa's armoury, and said to himself, "Let me take steps of hostility[4] against him." (30) He asked the keeper politely where the bow was of which the sacrifice was to take place. By means of his power and cleverness, on his asking, he (managed to be allowed to) lift up the bow, which was fated not to be the object of sacrifice, in his hand. With extreme ease he strung the string, and like the inner[5] filament of a lotus he snapped it. The crash filled the whole of Mathurá, yet when they heard it, no one understood[6] what had happened. The two brothers did not halt there, but started[7] off immediately, and the keeper went to Kaṃśa and told him what had happened. (35) From the arrival of Akrúra, he understood (that Kṛishṇa also had come), but on the breaking of the bow, he saw the fact clearly.[8]

All the cowherds who had come from Gokula (in attendance on Kṛishṇa) stopped at Akrúra's doorway. Who can tell the feasting[9] in honour of Hari? They had food of all the six flavours, and of the thirty-six kinds. Let us praise the joy of the wife of Akrúra, although she was very modest,[10] still she wished also to look at (Kṛishṇa).

[1] *Cf.* Bangáli **ব্যক্তি**. **माफिक** is the Arabic موافق.

[2] A very difficult passage. It is literally, 'and the soul of Kaṃśa was left in the vessel.' Kúbjá was the maid-servant in charge of Kaṃśa's sandal-wood, and she gave all she had (which was just sufficient for two persons) to Kṛishṇa. The Paṇḍits explain that the vessel being empty, only the desire (**इच्छ**) of Kaṃśa remained in it, *i. e.*, that there was no sandal-wood left for him. The use of **इच्छ** to mean 'desire' is peculiar.

[3] **चरचित = लिप्त**.

[4] **कुफार**, 'the preliminaries of a fight.'

[5] **बिस**, the white inner stalk of a lotus.

[6] **फुरल = फुटल**, *cf.* note [7], p. 23. Here the lit. translation is '(its true meaning) appeared to no one.'

[7] √ **बिटक**, 'start off quickly.'

[8] **झाक झाक**, 'clearly.'

[9] **पञ्जनागि**, 'the feasting in honour of a guest.'

[10] **घोघट** is the act of sweeping the veil across the face, which a woman does before a strange man. A bold woman only does this slightly (**छोट घोघट**), but a modest one covers her whole face (**बड़ घोघट**). There is a well-known riddle **आन कैं देव तोहरा नहिं**, (a wife asks her husband, 'what is that which) I give to another and not to you?' The answer is **घोघट**.

Having got certain news of the arrival of Hari, Kaṃśa sent for Chánura and Mushṭika; (40) and said to them, "Ye are my wrestlers, up to this day have I cherished you. I will act to you as your own brother, and in the morning will I divide the land and give ye half." When the two wrestlers heard this they rejoiced,[1] for they were men whose play (at wrestling) was famous in the world. Said they, "If they come before us, not one of the two shall be allowed to go[2] away alone." Then Kaṃśa called his elephant-driver, and told him the whole tale from beginning to end. (45) "Bring," said he, "Kuvalaya Píḍa at dawn, and warily place him by the doorway (to the place of sacrifice). Understand how thou must carry out the business. Act so that Kṛishṇa may not be able to approach." Next morning there was a cry of indignation in the city, for the honest men thought that the fight (between such wrestlers and Kṛishṇa) would not be fair, and condemned[3] it.

The poet Man'bodh in his heart[4] seeth this, that it is[5] proper that I should now describe the arena.

End of Book VIII.

Book IX.

The wrestling-floor extended over a whole league (in all directions), and (at the idea of) seeing the wrestling,[6] the minds of even the old men became excited. (They cried) "Let me also join in the sports, let me also try a fall. There is delay (about their coming); here, catch hold of my cloth."[7] In their various proper places hundreds of thousands of *lejims*[8] were deposited, and excellent heaps of wrestler's earth[9] piled

[1] √ मनुसा, 'be glad.'

[2] जाइ obl. verb. noun governed by पाधोत, making a permissive compound.

[3] √ नकार, *Lit.*, 'say no,' hence, 'disapprove.'

[4] हिदयाँ, obl. of हिदइ.

[5] बूझ is here impersonal.

[6] मरोँ, 'the act of wrestling;' *cf.* मरोँ, 'a gymnast's exercise,' in Rámáyan; not in Bate.

[7] नूचा, 'clothes generally,' not in Bate.

[8] A लेजिम is a bar hung with iron rings, which gymnasts hold in their two hands above their heads. The exercise is supposed to strengthen the shoulders. Not in Bate.

[9] कोठवार is the earth of an old granary (कोठो) which wrestlers rub upon their bodies.

up. Here and there the place was filled with pits[1] which had been dug, and there were Indian clubs of solid wood.[2] (5) The arena was[3] extremely vast, on all sides were many[4] palaces high as mountains.[5] There were two or three hundred two-storied stands. Here and there[6] there were bands[7] and *nách* girls dancing. According (to the rank of) those who were of chief and polite families,[8] so were stands allotted to them.[9] Kaṃśa's own grand-stand was a whole league high, and it would have been very difficult to ascend into it without a staircase. Why then did Kaṃśa prepare so high a stand? Can any one escape from the hand of death[10]? (10) While the assembly of the people was still going on, there rose a cry[11] of "He's come, he's come." In the door-way gleamed the golden diadem (of Kṛishṇa), together with Nanda and the other Gowálás. The elephant-driver struck his elephant and urged it on, and for a space Kṛishṇa played excellently[12] with it, and then seized the elephant's tusk, and tore it out

[1] **करिगह** is *lit.* 'a weaver's loom.' This is built over a pit, and hence the word is used to mean any kind of pit. **गह** means place.'

[2] **गुदगर**, 'possessing a **गूद**.' **गूद** (or **गुद्दा**) is properly a kernel, or the soft inside of anything. Thus the **गूद** of a shell-fish is the fish itself, the shell being called **खुँरचा**. Thus in the fable of 'the kite and the crow,' occurs the passage '**जेह डाँका धरती पर खसल, टूक टूक भे गेल। चाचोर कौचा चोकर गुदा खाय गेल। थोरवा काल में चिलहोरि नीचा उतरलि तँ खुँरचा छाड़ि किछु नहिं पौलक।** 'The cockle fell to the earth and was immediately smashed to pieces. Thereupon the crow ate up the inside. Shortly afterwards the kite came down, but could find nothing but the broken pieces of the shell.'

[3] In modern Mth. **भेल** never means 'was,' but only 'became.'

[4] **खण्ड**, 'a piece,' here is used as a sign of the plural.

[5] **पहण्ड** is said by the Paṇḍits to = **पहाड़**, 'a mountain.' It is necessary, however, to receive this interpretation with some caution, for the word is not used in modern Mth. in this sense nor is its derivation clear. Also **खण्ड पहण्ड** is used in modern Mth., to signify 'pieces,' the word **पहण्ड** being apparently only a reduplication of a **खण्ड**.

[6] **कऊ**, '*lit.*' 'somewhere.'

[7] **बाजन** is Bhojpúrí plural of **बाजा** a musical instrument.

[8] **सील** commonly means 'modest,' 'polite,' in Mth.

[9] *Lit.*, 'so (there was an order) of making stands for them.'

[10] *I. e.*, Kaṃśa foolishly thought that he could provide for his own safety by doing so.

[11] Pers. شور.

[12] **खूलि**, *lit.* 'openly.' Used frequently idiomatically to mean 'very well.' The idea is that a man tied up cannot do anything well.

of its socket with his hand. With this tusk the Lord of Vraja then slew it. When Kuvalaya Piḍa fell like a mountain[1] on the earth, and Kaṃśa saw it, his pride fell down.[2] (15) Taking the excellent elephant's tusk as an excellent weapon in his hand, Hari went forward accompanied by Haladhara. Heavenly damsels became incarnate in Gokula. Though they had fortune and many relations, yet cared they nothing for them.[3] Only gazing (on Kṛishṇa), made they known their love to him, and in their hearts desired[4] only Kaṃśa's death. "If he lives" (said they), "all will lose their happiness, but if this scoundrel[5] dies, it is well for all of us." With the city wives stood Devakí, her eyes, like clouds, filling with rain. (20) As she saw the face of her son her breasts filled, and milk which they could no longer contain[6] gushed forth from them (in her affection). With Akrúra stood (his brother) Vasudeva (saying to himself), "at last I shall see the countenance of my child." Thrusting several[7] people aside Kṛishṇa advanced and proclaimed thus in the assembly. "Chánura hath exceeding might, and I am tender: it is greatly unfair that I should wrestle[8] with him." The people of the assembly heard this and were filled with shame, but out of fear of Kaṃśa no one spoke. (25) Then He who beareth the conch-shell in his hand, again spake, considering in his heart, but his words were lost (on the people). "To-day this unfair practice[9] will cease for ever. I am not a common[10] wrestler[11] of my house. I cannot bear this longer,[12] let him who comes, come now."[13] Kṛishṇa slapped (his arms), and rose with a roar, and the people began to guess[14] about (the chances of) victory and defeat. One foot he set (before him) straightened, (and the

[1] भीर or भीरँ is the high mound round a tank.

[2] √ झर, 'drop,' usually reserved for fruit dropping from a tree.

[3] See note [1] p. 12. Read as before चरिगरलि.

[4] An unusual meaning of √ मनाव.

[5] मुड़हा is an abusive term. It means *lit.* 'one who has lost his head.' Hence 'a capless fellow,' used only in abuse.

[6] *Lit.* 'The act of being contained did not take place.'

[7] *Lit.* 'four.'

[8] *Lit.* a wrestling (between) him and me is greatly unfair.'

[9] परिक = अभ्यास.

[10] A common use of पुहन, 'such.'

[11] खेला, here 'one who sports,' 'a wrestler.'

[12] *Lit.*, 'as long as there is no time, so long do I bear it.'

[13] चाव is the usual Mth. form of the Hindí चव.

[14] चटकर, 'a guess,' *i. e.*, चटकर सौं गेलाह, 'he walked by guess,' of a man going along on a dark night.

other) behind him, and twisting his left knee, he set it before him.[1] (30) With violent challenges he planted his hands, for greatly skilled in wrestling was the lord of Vraja. (Chánura), who had wrestled[2] much, came up, saying "Wait![3] Let[4] me pound thee." He rubbed earth on his great stout arms, (and appeared) in no way smaller than Kumbhakarṇa. He himself was deceitful and mighty, and his caste was very vile; so for a space there was a great boxing[5] match. Putting their heads down close together,[6] Kṛishṇa put forth his hand, and several times clasped him only round the neck. (35) Strong-armed (Kṛishṇa) pressed him down with one arm.[7] Who was it that taught him that trick[8] there? Adopting that trick Kṛishṇa warded him off, and knowing himself to be powerless[9] (against Chánura after performing it), instantly[10] released himself. So also when Kṛishṇa seized him Chánura in like manner reserved[11] (a counter trick). And seeing that, the hearts of good men became glad.[12] In this way,[13] the wrestling lasted for a long time.[14] And every now and then they would walk round[15] each other, and clap their own hands (in defiance). At length in the arena[16] Kṛishṇa gave up tricks to the *Naṭ*,[17] and swooping on him, struck him

[1] *I. e.*, knelt down on his left knee.

[2] सरैं, see note to v. 1.

[3] ऊरौं, an interjection meaning "Wait!" The √ ऊड़ means 'wait.' ऊरौं is probably Bhojpúri, and means *lit.* 'Let me wait.'

[4] करौं, Bhojpúrí, 1 sing. pres. conj.

[5] मुष्टा in मुष्टामुष्टि is an oblique form. The compound means 'a boxing on a boxing,' 'a mutual boxing,' like मारा मारि in note,[6] p. 17.

[6] *Lit.*, 'making their heads approach,' a posture in wrestling.

[7] एक हत्थो गेात, is the special name of a trick at wrestling, consisting in pressing down (√ गोत) the opponent with one arm.

[8] दाखो, the technical term for a trick at wrestling. खेात = खोतय, 'then.'

[9] An unusual meaning of असक्ख.

[10] वक्क दै 'immediately.' *Cf.* Mth. Chr. Sal. 19, वक दै उठल.

[11] √ जोगाव, = 'preserve,' = जुगाय; *hence*, 'reserve.' Read खोदो जोगाव.

[12] √ जुड़ा = H. √ जुरा. They were glad because they saw that the two were equal.

[13] एँ instr. governed by परि. It corresponds to the Vedic एन, 'by this,' which was lost in later Sanskrit, but has been preserved in Mth.

[14] काल 'time' is here feminine.

[15] भाउरि, 'a circling,' *cf.* चक भाउर in Mth. Chr. Sal. 7.

[16] रङ्गि, for रङ्गे, loc. of रङ्ग.

[17] *Naṭs* are a tribe of gypsies who are famous for their wrestling powers. Hence the word is used for any great wrestler. The meaning is that Kṛishṇa left all such

instantaneously, and felled him to the ground. (40) Blood flowed in torrents from his mouth and nose, and the earth for a *bighá* round him became thereby a morass. Chánura the wrestler became crushed to pieces,[1] and died, what life can there be to him whom Hari hath touched in anger? Just as[2] Hari had done[3] to Chánura, so also did Haladhara slay Mushṭika. Toshala the wrestler, seeing this, became wroth, and rose clapping his hands as a mighty challenge. When he had slain Toshala Hari approached Kaṃśa, and (like) what bird of the air did he become (in that he was able to ascend the lofty stand)? (45) Upon the stand,[4] in real verity,[5] he hurled him down, and without letting him go dashed him down to the ground.[6] He thrust on him an infinitesimal portion of his weight[7] (in his character) of the universe, and Kaṃśa immediately[8] gave up his breath. (Pretending) to think that Kaṃśa was annoyed in his heart (at the treatment he had received) Kṛishṇa seized him by the hair,[9] and dragged him some distance. On seeing this Kaṃśa's brother, named Sudáman ran up challenging him, but, swooping down between them Haladhara seized him, and laughingly treated him in the same way.[10] (50) When the five men had been killed, (although) other (demons present) were spared, the arena became as (horrible as) a burial-ground.

Then Kaṃśa's mother, wife, and younger brother's wife came up, and in piteous grief rolled[11] upon the ground. Into Hari's ears[12] came the cries of the dying,[13] and even his eyes filled with tears. (He consoled

petty devices as tricks to Chánura, and forthwith killed him by sheer display of force.

[1] **हञ = चूर्ण**, 'ground to powder.'

[2] **जे परि = जैं परि**, *cf.* **ऐं परि** in v. 38. Read **परि हरि**, and not **परिहरि**.

[3] **बनल** is here used for **बनाओल**.

[4] **मचहि** is here the general obl. form of **माँच**.

[5] Obl. of **सचमच**, 'real truth,' a reduplication of **सच**.

[6] **हेठ = नीचा**, 'below.' *Cf.* Bangáli **हेट मुख**, in my notes on the Rangpur dialect, see J. A. S. B., No. 3 for 1877, p. 199, l. 15.

[7] **भर = भार**.

[8] **फाँहि**, 'immediately;' apparently the indecl. part. of a √ **फाँह**, which I have not met elsewhere.

[9] **कच = केस**.

[10] **ओहे परि** is the correlative of **ऐं परि**. There is no form **ओहैं** corresponding to **ऐं**.

[11] **कत**, 'how much,' hence 'exceedingly.'

[12] **कोक**, for **कोख**, = **कोष**.

[13] **मर लोक**, a common expression for 'a person at the point of death.'

them), giving them advice and hope, and went about quietly and ashamed.[1] (Then Kṛishṇa said to Nanda) "No one knows what may happen. My father, do thou return now speedily before me (to Gokula). (55) While I am absent, watch, I pray thee, my mother (Yaśodá) that she waste not away." With these words Hari gave him leave to go, and gave him ten million jewels out of Kaṃśa's store[2]. Going a little forward Hari and Ráma, made salutation to the feet of their father and mother (Vasudeva and Devakí), saying "For so long was it impossible to honour you, I pray ye to pardon my fault. It was difficult even to save my life, so that I might be preserved from Kaṃśa's (60) hand." Vasudeva remembered the former portents[3] (which had occurred at Kṛishṇa's birth), and with Devakí fell at his feet. Understanding (who Kṛiśhṇa was) Vasudeva sang greatly of his virtues, and then Kṛishṇa again cast his illusion over him, (and caused him to again become ignorant of his supernatural origin). All the members of the house of Yadu who were there made to him fit salutation, and the tree of Vasudeva's faith bore fruit, for the eternal Essence had (humbly) fallen at his feet. Then Kṛishṇa sent for Ugrasena and with modesty had his bonds cut, saying, "Let not the Yádavas feel grieved, although they are under Yayáti's curse. The fourteen worlds move at his commands, whose servants I and Haladhara are." He then waved chowries[4] over the king's throne, and set the umbrella of state over Ugrasena's head.

The friend of the miserable, the Lord of the lordless, the one giver of happiness, the holy lord of Vraja, these names are all called Kṛishṇa's sport, and may holy Ráma put difficulties far off. Saith Man'bodh, I have told the tale of Kaṃśa's slaughter. What happened afterwards, that remains to be said.

End of Book IX.

Book X.

There have arrived[5] the wives of Kaṃśa, the daughters of Jarásandha. In many ways they display their state of widowhood coming

[1] हरिहिँ is here the instrumental used as Nom. before the past tense of a transitive verb. सह, see note [1] p. 24. अपतिँभ (Skr. अप्रतिभा), 'without brilliancy,' hence, 'ashamed.'

[2] *Lit.* 'kept by Kaṃśa.'

[3] *Lit.*, 'qualities.'

[4] चौर डराइब, is the usual phrase for waving a fly-flapper.

[5] अछि is the Skr. 'there is,' परापति is fem. of परापत = प्राप्त, used in Mth., to mean 'arrived.'

running to their father's palace. In piteous plight, how much had they to tell! and hearing their story he could no longer contain himself. (Said the widows), "The son of Nanda hath made me a widow.[1] A thing which ought not to have been possible by the strength of any one.[2] (5) The moon may fall (from the sky), the earth may dry up, Mount Meru itself may desert its site, and go elsewhere. All this may rather be done, yea, can[3] be done, but not that a gowálá, a (common) stave-bearer, should kill a mighty warrior. We will not drink water, until we take (vengeance on) the enemy of our husband." Jarásandha comforted them, collected his camps and roughly counted[4] their numbers. (From) Soraṭh, Bhoraṭh, Gaṛh'pál, Anga, Banga, and Nepal; from Betiá, Tirhut, and other countries, his majesty summoned all the kings. They could not be contained in all his forts, there was no room even in the whole land of Magadh.[5] The army waxed in size for ten or twenty days, and then all issued in the direction of Mathurá. The sight of the sun was obscured by the dust, and it is lucky that the back[6] of the mundane tortoise did not break in (with the weight). There was not a drop of water or (a grain of) food to be found in the moon or on the earth. The ocean itself took refuge in (the hell called) Tala.

(15) At eventime there rose a hubbub from the army, on hearing which His Majesty got a headache[7]. So then old and reverend ushers, with wands in their hands went about calling in all directions, 'silence' 'silence.' The camp stopped, and surrounded the fort (of Mathurá) as a falcon swoops upon a quail. To Hari the gate-keeper said respectfully[8] "there is a sound of drums near[9] the city. Who can tell the size of the army? It is as if the whole universe were densely collected[10] together." (20) When they saw this their faces became

[1] *Lit.*, 'taken the vermilion from my hair,'—a sign of widowhood.

[2] *Lit.*, 'which one would not think (proper) for the being done by the strength of any one.' होमप्र is obl. form of the verb. noun of √ हो, 'be.' The म is an euphonic addition as in देमैं, लेमैं, see Mth. Gr. §. 189, 3, add. ... बूत = 'strength,' 'power.'

[3] होमप्र पारब, 'to be able to be done.'

[4] See note to 9, 28.

[5] Jarásandha's kingdom.

[6] The paṇḍits translate चमठ, by 'back,' but they are doubtful as to the exact meaning of the word.

[7] *Lit.*, 'pain in his mind.'

[8] चरज = Ar. عرض.

[9] नगेरा, 'a camel-drum.'

[10] *Cf.* coll. Mth., मेघ उमड़ि आएल, 'the clouds are dense.'

dry,[1] and in their mouths the lips[2] of the Yádavas were parched. Only one was joyful, the holy Lord of Vraja, (as he thought) "To-day will I raise the burden of the earth." When the others considered that Hari was joyful in his heart, all knew certainly that there would be victory. Every one took up his weapons, and the Yádavas all became ready, and assembled. Ugrasena, Uddhava, Akrúra, and Varmásura whose deeds were famous in the world. (25) Akrúra became an extremely excellent hero, imposing in his chariot, he shone like Arjuna. All began to talk of the battle, and in union with their bodies, their heroism awoke. Dáruka[3] brought and equipped the great chariot, and each side began to play its drums. Hari went outside with all the chariots, as the Bráhmaṇs all blessed them. With a laugh Haladhara advanced and took the betel.[4] In the battle-field, who ever was such as he. (30) "To my knowledge, this (Jarásandha) was exceeding wicked, let us consider how to deal with him."[5] (Jarásandha) who had done many evil deeds joined in battle with him who was devoted to wine,[6] and Haláyudha went in front of the excellent battle. Equal with equal began the fight, in order that nothing might be done contrary to fair play.[7] Jarásandha joined combat with Haladhara, for who else could stand before him. The king took his club, and fought with it, while Haladhara raised his pestle. (35) Knowing that success would be fruitless, an oracle proclaimed from the sky, "Come now, spare him, spare him Haladhara. I have arranged a method of killing him." The king[8] hearing this portent began to run and this favourable oracle became unfavourable to him. Leaving the battle-field the king fled,[9] and Haladhara threw aside his pestle. The victory was given to the strong, and defeat

[1] बफदर is a kind of ring-worm, which, when it drops, leaves a dry place behind, at the place which it had attacked. The translation is, literally, 'the ring-worm dropped from the faces of all,' that is to say, 'the faces of all became dry with fear.'

[2] फुफरी is 'parching' or 'cracking of the lips.'

[3] Krishṇa's charioteer.

[4] मै, see note to [1], p. 13. When a forlorn hope is wanted, those who volunteer, signify their willingness by stepping forward, out of the ranks, and picking up a betel roll deposited for the purpose. *Cf.* Chand, Revátaṭa 16.

[5] *Lit.*, 'how it will be done.'

[6] This half line is very difficult. The above is the best meaning I can make out of it, but it is not much. It appears to be literally, 'he, having done bad qualities, joined with him who had the quality of wine.' Haladhara was by tradition a great drinker as well as a great hero.

[7] *Lit.*, 'virtue.'

[8] *Lit.*, 'the enjoyer of the earth.'

[9] √ परा = 'run away,' *cf.* Bangáli পলাইতে.

to the wicked, and all the men of Anga, Banga and Tailanga were scattered. (40) On that day Hari showed unlimited prowess[1] like a hundred Arjunas and two hundred Bhímas, and the enemy fought as much as it desired with him, as a moth leaps and falls into a fire. It cannot even be counted how many men Hari slew, in order to raise the burden of the earth. Some of the generals fled towards their home, and those who remained behind were killed. The Yádavas remained thick as clouds in the month of Bhádō, and none of them were scattered having Hari for their support.[2] (45) They showered arrows like a rain (so heavy) that the enemy thought that creation was coming to an end (in a flood). Every king, who joined combat with the Yádavas, immediately found himself close to the gates of death.[3] So the army returned, and the portion which was left behind was washed away in a stream of blood,[4] in which the floating shields were like the tortoises, and the turbans, snakes. Kṛishṇa let a few of them escape, so that he might grant (the world) a benefit, as he would again (be able to) collect (and carry away) the burden of the earth. (50) Those who had been[5] so stout (and valiant) and now so small, did not, out of shame, return to their fortress. The brave enemies[6] of the earth again collected, and again shamelessly arrived (against Mathurá). For their reward they all got arrows (sharp as) scorpions, and again they returned to the place whence they had ridden. Again they began to fight, and again were beaten, nor did there remain to them a comrade, or joy, or love. Again they mounted and came, and again were defeated, and thus the war was repeated fifteen times.

(55) Saith Man'bodh, "The Lord of Magadha returned, and the troops who came with him all died."

End of Book X.

[1] *Lit.*, 'made an unlimited battle.'

[2] थेघ, 'a support.'

[3] धरम = यम.

[4] सिधुर विधुर, 'blood and the like.'

[5] बहलाइ, old form of हलाइ. *Cf.* the old Bangálí form बाहिलाम for हिलाम.

[6] *Lit.*, 'death.'

PART III.

Index to Man'bodh's Haribans.

INTRODUCTION.

The form of the index explains itself. The only point to be made clear is the alphabetical order, which differs somewhat from that hitherto in use. Neither the anunásika nor the distinction into short and long vowels is allowed to affect the order of words. Or, to put the matter another way: each of the sets अ, अँ, आ, आँ —— इ, इँ, ई, ईँ —— उ, उँ, ऊ, ऊँ, &c., so far as alphabetical order is concerned constitutes one letter only. Accordingly, I first give all words containing the sound *a*, irrespective of that sound being short, long, or nasalized, and simply arrange them according to their consonants; next come all words containing the sound *i*, similarly arranged; next, in similar order, those containing the sound *u*, and so forth.

This principle of disregarding quantity and nasalization secures a distinct and important practical (as well as scientific) advantage, which could not be obtained by any other arrangement; for it results in bringing into more or less close juxtaposition pairs, or sets, of words of identical origin and meaning: as आँगन, and अँगना, 'a courtyard.' √ सूत 'sleep', and √ सुताव, 'cause to sleep', √ मर 'die', and √ मार, 'kill'. The advantage gained from this is obvious, when we consider that Bihárí roots containing a long vowel, shorten that vowel whenever it falls in the antepenultimate and is followed by a consonant, and that hence in the case of such roots many forms will be found occurring derived from the same root, and only differing in the quantity of the antepenultimate vowel.

This system of alphabetical arrangement for Gauḍian languages is put forward tentatively, and criticism on its practical and scientific advantages and disadvantages is solicited.

॥ अ ॥ ॥ आ ॥

√ आ, pres. 3 sg. आइ, II, 41: आव, V, 42: आवो, II, 46: 3 pl. आवथि, X, 54: imperat. 2 pl. आवह, VI, 32: 3 sg. आवओ, IX, 27: fut. 1 sg. आवोब, 1, 32: VII, 16, 50: VIII, 23: 3 sg. आवोत, VIII, 43: past. 1 sg. आइलउँ, I, 17: 3 sg. आइल, IV, 25, 40: V, 5, 6, 14: VI, 7, 24: VIII, 36: IX, 10, 31, 52: X, 9, 23: fem. आइलि, V, 45: VI, 2: IX, 51: 3 pl. ऐलाह, II, 25: ऐलाह, II, 2: VII, 46: X, 55: past part. आइल, X, 19: periphrast. pres. 3 sg. अवइछि, IX, 27: verb. nouns obl. आवइ, VIII, 46: instr. sg. अइलहि,

VIII, 35: indecl. part. आइ, I, 35: V, 2: IX, 55: X, 36, 51: (*cf.* √ आन) आनि, II, 5, 16, 49: V, 48: VIII, 45.
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अकाइ, III, 10.
अकट, II, 59.
अकरुड़, VIII, 38: IX, 21: अकरूड़, VI, 26: VII, 18, 27, 37: VIII, 7, 36: अकरूर, VI, 43: X, 24, 25: gen. अकरुड़क, VI, 49: VIII, 35: अकरुड़ञ, VII, 17.
अकलेस, VIII, 32.
अकास, I, 36: gen. अकासक, II, 5: X, 35.
आकुल, fem. आकुलि, II, 56.
√ अकुला, past 3 sg. अकुलाइल, IV, 40.
अखाड़, IX, 1.
आँखि, IV, 23, 40: V, 45: VI, 8, 11: VII, 23, 51: IX, 52.
आगत, IV, 49, 53: VII, 5: fem. आगति, I, 18.
आँगन, III, 15: V, 11, 31: VI, 16: obl. आँगना, II, 7, 45: VII, 43: आगनऊँ, III, 2.
आँगना, *see* आँगन.
आगम, I, 3.
आगमन, gen. sg. आगमनक, VIII, 39.
आगर, IX, 7.
आगार, VIII, 29: आगार, II, 35.
आगलइ, fem. आगलहि, II, 30.
आगि, III, 6: IV, 21: V, 32: X, 41.
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√ आँगिर, indecl. part. आँगिरि, VI, 41.
आगिल, obl. adj. आगिलहि, IV, 7.
आगु, I, 9, 12, 39: VI, 42: VII, 6, 8: VIII, 7: IX, 15, 22, 57: X, 31, 33: obl. आगाँ, IX, 29: (?) loc. आगँ, IV, 1.
√ आगुआ, indecl. part. आगुआइ, IX, 54.
आगे, II, 62.
√ आगेर, indecl. part. आगेरि, III, 16.
आघिम, IX, 70.
आघात, III, 12.
आङ्गन, VII, 28, 29.
आङ्ग, V, 32: X, 9, 39.
आचल, V, 28, 46: VIII, 6.
√ आछ, pres. 1 pl. छिअ, IX, 66: 2 pl. छिअ, V, 22: 3 sg. आछि, I, 2, 3, 15, 37: IV, 19, 49: V, 18: VI, 34, 35, 45: VII, 38, 39: X, 19: आछइ, VIII, 18: 3 pl. छथि, IV, 35, 59: VII, 32, 51: past 3 sg. छल, II, 53: IV, 57: VI, 6, 48: VII, 5, 60: VIII, 16, 17: IX, 58, 59, 62: X, 11, 30: fem. छलि, VII, 33: 3 pl. आछलाह, X, 50.
आज, I, 17: III, 14: IV, 22, 59: VI. 30: VIII, 18: IX, 26: X, 21: gen. (with emph. कि or? obl.) आजुकहि, VIII, 40.
आजगुत, II, 62: IV, 27: V, 56: VIII, 2.
आजन्म, VIII, 31.
आञ्चल, III, 19.
आञ्जलि, I, 10.
√ आट, past 3 sg. आटल, IV, 17: IX, 20: X, 11.
√ आटक, past 3 sg. आटकल, VIII, 34, 36: X, 17: past part. (forming passive) आटकल, VIII, 1.
आटकाओ, VI, 40.
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अड़रा, IV, 39.

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अथाइ, I, 3.

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आदिम, II, 22.

आध, VI, 31 : VII, 11 : VIII, 41.

अधिक, VIII, 15 : IX, 31.

अधलाइ, fem. अधलाहि, VII, 48 : VIII, 25.

✓ आन, pres. conj. 3 sg. आन, VI, 39 : imperat. 2 pl. आनह, I, 28 : indecl. part. (*cf.* ✓ आ) आनि, III, 3.

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✓ अनाव, indecl. part. अनाइ, IX, 64.

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✓ अनुमान, indecl. part. अनुमानि, IV, 34 : X, 22.

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अपनहिं, nom. अपनहिं, I, 32 : V, 18 : VII, 41 : X, 27 : अपने, V, 43 : gen. dir. अपन, II, 47, 63 : IV, 41 : V, 19 : VI, 24 : VII, 8, 29 : IX, 8 : X, 23 : अप्पन, X, 27 : obl. अपन (?), III, 21 : IV, 11 : अपना, II, 9.

आपन्न, X, 14.

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अपराध, IV, 49, 52 : IX, 58.

अपर्त्तिभ, IX, 53.

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✓ अवगाह, indecl. part. अवगाहि, VIII, 25.

अवजा, VIII, 26.

✓ अवतर, pres. 3 sg. अवतरइ, V, 55 : fut. 1 sg. अवतरब, I, 20 : past 3 sg. अवतरल, V, 29 : fem. अवतरलि, IV, 15 : IX, 16 : verb. noun. अवतरब, VI, 45.

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✓ अवधार, indecl. part. अवधारि, IV, [58.

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अविनि, X, 51.
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अभिमत, VI, 30.
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√ अरवध, indecl. part. अरवधि, II,
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√ अलसा, indecl. part. अलसाइ, II, 48.
अलोप, V, 35.
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√ अस, Skr. pres. 3 sg. अस्ति, X, 1.
असक्य, IX, 36.
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अहाँ, acc. sg. प्रेहा काँ, V, 18.
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√ अहिगर, past 3 sg. fem. अहिगरलि, IV, 15: IX, 16.
अहीर, IV, 12.
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√ अह, fut. 1 sg. हेब, I, 14: 3 sg. हैत, I, 3, 4: हैत, I, 36: II, 4: IX, 59: pres. part. obl. हैत, II, 42: VII, 46.

॥ इ ॥ ॥ ई ॥

ई, subst. nom. or dir. adj. ई, I, 26, 38: II, 28: VII, 57: VIII, 29: IX, 59: X, 6: subst. nom. प्रहि, IV, 19: प्रह, V, 56: X, 30: हिनि VII, 39: हिन, II, 61: subst. acc. ई, I, 22, 36: II, 6, 36, 39, 62: III, 8: IV, 51: V, 49: VI, 25, VII, 17, 31, 52, 59: VIII, 10, 11, 26, 42: IX, 56, 58: प्रह, II, 7, 34: VII, 5: VIII, 48: subst. obl. प्रहि, IV, 38: adj. obl. प्रहि, I, 17: IV, 5, 54, 56: V, 43, 57: VII, 14: instr. sg. एँ, VI, 5: VII, 46: IX, 38: X, 54: gen. sg. dir. एकर, IX, 69: प्रकर, I, 38: IV, 22: VII, 39.
इआर, II, 1: VIII, 9.
इंदर, I, 36: V, 21, 23, 34: VI, 37: VII, 14: इन्दर, I, 24: gen. इंदरक, V, 27.
इन्दु, X, 14.
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उकठी, II, 19.
उकुति, VIII, 22.
उखरि, III, 8, 9 : ऊखरि, III, 16.
√ उग, indecl. part. उगि, IV, 8 : V, 51.
उग्रसेन, VI, 29 : IX, 64, 67 : X, 24.
उच, VI, 8 : ऊँच, IX, 9.
उचित, I, 38 : IV, 5.
√ उछल, indecl. part. उछलि, X. 41.
उजर, VII, 7.
√ उठ, pres. 3 sg. उठ, V, 37 : X, 15 : past 3 sg. उठल, VI, 40 : VIII. 10 : IX, 28, 43 : indecl. part. उठि, V, 32 : VII, 29.
√ उठाव, indecl. part. उठाइ, I, 35 : V, 15 : VI, 37 : VIII, 31 : उठाइ, X, 34.
√ उड़, past 3 sg. उड़ल, II, 29 : indecl. part. उड़ि, I, 36 : II, 32.
उड़, VII, 20.
उतपात, IV, 2 : V, 26 : gen. उतपातक, V, 52.
√ उतर, indecl. part. उतरि, VIII, 1 : obl. verb. noun, उतरइ, VI, 14.
√ उतार, fut. 1 sg. उतारब, X, 21 : obl. verb. noun, उतारइ, X, 42.
उदार, I, 31.
उदव, X, 24.
उधार, VI, 45.
√ उनट, past 3 sg. उनटल, II, 58.
√ उनटाव, past 3 sg. उनटाओल, II, 60, 61.
उपकार, VI, 14 : X, 49.
उपगत, V, 21.
√ उपज, past 3 sg. उपजल, II, 17.
√ उपट, past 3 sg. उपटल, IV, 7 : indecl. part. उपटि, IV, 5, 7.
उपद्रव, IV, 4.
उपर, III, 3 : VIII, 4 : IX, 45.
उपलखन, VIII, 14.
उपाइ, IV, 22 : VI, 19 : X, 36.
√ उपार, past 3 sg. उपारल, III, 11 : उपाड़ल, IX, 13 : indecl. part. उपारि, V, 46 : VI, 13.
√ उबह, pres. 3 sg. उबह, V, 13.
√ उमड़, indecl. part. उमड़ि, V, 36 : X, 19.
उर, II, 41.
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एकटक, IV, 33.
एकसर, IV, 26.
एखन, I, 3.
एत, V, 56 : IX, 58 : एत, V, 33 : obl. एतइ, VIII, 14.
एतबइ, VI, 15.
एतेक, III, 16.
एँहा, *see* अहाँ.
एहन, II, 21, 57 : IV, 46 : V, 18 : VI, 42 : VII, 25, 36 : IX, 26 : X, 29.

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ओ, subst. nom. ओह, IV, 8: ओहि, IV, 58: ओहे, VI, 23: वेह, I, 29: dir. adj., ओ, IV, 58: IX, 36: subst. obl. sg. ओहि, V, 13: ओहे, IX, 49: ओ, VI, 15: (with emph. ओ) ओहओ, I, 31: ओहो, IX, 37: adj. obl. ओहि, I, 29: IV, 6, 8, 57: V, 54: VI, 3, 24: VIII, 16: IX, 62: X, 40: ओ, VI, 41: ओ, VI, 20: VIII, 16: gen. sg. ओकर, VIII, 18: ओकर, IX, 47: subst. nom. pl. ओनि, VIII, 35: obl. pl. ओनि, IX, 23: ओन, X, 36: ओनकहि, IV, 17: gen. pl. ओनकर, VI, 23.

√ ओचार, indecl. part. ओचारि, II, 43.

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√ ओड़नाव, past 3 sg. ओड़नाओल, [III, 9.

ओत, IX, 35.

ओतबै, V, 13.

ओतहि, II, 56: VI, 3, 41: VII, 50.

ओतइ, I, 8: ओतइ, VIII, 16.

ओति, V, 51.

ओतै, VII, 38.

ओदर, VI, 12.

ओरख, VII, 54.

ओहन, VI, 9: fem. ओहनि, II, 26: obl. ओहना, II, 57: loc. ओहनै, I, 8.

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औ, IV, 37, 10, 9.

और, X, 10, see आओर.

॥ क ॥

काँ, sgn. of acc. I, 34: II, 49: V, 7, 18: VI, 2.

काँ, sgn. of dat. I, 19, 29: II, 4, 40: III, 5, 15: IV, 6, 16, 40: VI, 15: VII, 51, 60: VIII, 13, 15: IX, 42: X, 1.

कंग्र, I, 34, 35, 37: II, 4, 5, 6, 7, 11, 12, 18, 31, 35, 39: VI, 21, 26: VII, 16, 30, 32: VIII, 34, 40, 44: IX, 9, 44, 70: gen. कंग्रक, II, 29: VI, 16, 41: VII, 31: VIII, 27, 29: IX, 14, 17, 24, 46, 48, 51, 56, 59: X, 1.

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कागपुच, IV, 31.

कच, IX, 47.

'कह, II, 45: IV, 23.

काह, II, 47.

काहु, X, 48.

काज, V, 33: VI, 30, 42, 45: VII, 15: gen. काजक, II, 56.

√ कट, past part. obl. कटला, II, 52.

कट, VII, 7.

√ काट, pres. 3 sg. काट, VII, 2: see √ कटाव.

√ कटाव, past 3 sg. कटाओल, IX, 64: see √ काट.

कटक, X, 8, 11, 17.

कटगर, II, 7.

कटु, VII, 35.

कटोर, loc. sg. कटोरहि, VIII, 27.

काठ, gen. काठक, IX, 4.

कठा, V, 15.

कठिन, V, 15: IX, 59.

कठोर, VII, 36.

कड़, II, 60.

कड़रा, IV, 39.
√ काढ़, indecl. part. काढ़ि, VII, 43.
कत, IV, 43 : V, 39 : VI, 36 : IX, 51 : X, 3.
कतए, VIII, 30.
कतऊ, II, 31, 56 : IV, 54 : V, 17, 52 : IX, 9 : X, 11.
कतूहल, IX, 69.
कतै, IV. 50.
कतोएक, III, 1 : V, 21 : X, 43.
कथा, I, 39.
कथि लए, *see* की.
कथुक, *see* किछु.
कदगुन, X, 31.
कदम, gen. कदमक, IV, 23.
कदाचित, I, 4.
कान, I, 22 : VII, 24 : IX, 52.
√ कान, pres. 3 pl. कानथि, IV, 32 : pres. part. fem. कनइत, VIII, 12.
कनक, VII, 21 : IX, 11.
कन्द, V, 23 : VII, 20.
कानन, I, 11, 16.
कन्या, II, 28.
कान्ह, VI, 8 : IX, 34.
कन्हैर, VI, 8.
√ काँप, pres. 3 sg. काँप, I, 13 : indecl. past. काँपि, VI, 9.
कबड़, VII, 35.
कबि, I. 1 : VII, 24 : VIII, 48.
कमठ, gen कमठक, X, 13.
कमल, I, 5 : str. from कमला, III, 11 : कमलाइ, V, 4 : कमलासन, I, 12 : II, 1.
√ कर, pres. 1 sg. करिअ, I, 5, 17 : IV, 22, 53 : 1 pl. करिअ, II, 61 : 2 pl. कर, V, 25 : 3 sg. करए, X, 16 : करइ, II, 15 : कर, IV, 26 : V, 5, 20, 26 : VII, 23, 40 : 3 pl. करथि II, 8 : pres. conj. 1 sg. करौं, IX. 31 : करिअ, VIII, 29 : 3 pl. करथु IV, 43 : imperat. 1 sg. करब, X, 30 : 2 sg. कर, VI, 35 : 2 pl. करह, V. 35 : VI, 30, 39 : VIII, 9 : 3 pl. करथु, IX, 69 : mild imperat. 2 pl. करिअ, VI, 19 : IX, 2, 65 : fut. 1 sg. करब, I, 33 : VI, 31, 32, 46, 47 : VIII, 41 : X, 7 : 2 pl. करब, II, 39 : VIII, 46 : IX, 58 : 3 sg. करत, V, 18 : VI, 36 : past 1 sg. कैल, IV, 52 : 3 sg. कएल, II, 11 : IV, 24 : VI, 17 : कैल, VII, 8, 17, 31 : VIII, 40 : IX, 57, 62 : X, 18 : कैल, II, 37 : III, 20 : IV, 41 : V, 10, 47 : VI, 18, 25 : VII, 29 : VIII, 5, 19 : IX, 3, 9, 49, 56 : X, 40 : कैलक, IV, 27 : VII, 3 : 3. pl. कएलचन्हि, VI, 6 : कैलन्हि, IV, 19 : VII, 49 : VIII, 3, 29 : perf. 1 sg. कैल चहि, I, 2 : verb. nouns, obl. करए, V, 55 : VII, 34 : X, 26, 45 : करबाँ, VI, 42 : gen. करएक, IV, 39 : indecl. part. करि, VII, 40 : कए, I, 30 : IV, 21, 55 : VIII, 21, 31 : X, 3, 35 : कै, II, 34 : IV, 46, 57, 60 : V, 14, 20, 30, 33, 36, 53 : VI, 10, 43 : VIII, 2, 7, 26, 30 ; IX, 29, 30, 31, 43, 51 : X, 31, 52 : (as auxiliary affix to form conj. part. of another verb,) (कै, कऽ, or कऽ) कै, II, 50 : X, 41 : कऽ, III, 5 : IV, 44 : V, 6 : VIII, 2, 16 : IX, 14 : X, 54 : कऽ, II, 12 : IV, 30 : V, 10, 61 : VI, 3 : IX, 49 : adv. part. करितहि, IV, 46, 62.
कर, II, 8. 17, 18 : VII, 8, 57 : VIII, 31 : X, 13.
कार, gen. कारक, VIII, 15.
कारागार, II, 35.

करम, gen. करमक, II, 11.
√ करख, indecl. part. करखि, II, 51.
करि, करिगइ, IX, 4: करिवर, VI, 34: IX, 15. [करनामग्र, I, 19.
करना, I, 19: VII, 40: IX, 51: X, 3: करूर, VII, 37.
काल, II, 4, 10: IV, 57, 61: V, 39: VI, 34: VIII, 16: IX, 38: X, 51: gen. कालक, II, 13: IX, 9.
कलह, II, 2: VI, 15.
कालि, I, 38, *see* काल्हि.
काली, IV, 19, 51, 60: V, 56: VI, 18.
काल्हि, VI, 25, *see* कालि.
कष्ट, V, 61.
√ कह, pres. 1 pl. कहिअ, VII, 35: 3 sg. कहग्र, II, 61: IV, 48: VIII, 10: कहओ, VI, 5: कह, II, 18: IV, 34: V, 17: VII, 42, 45: pres. conj. 1 sg. कहिअ, VII, 26: 2 pl. कहिअ, VII, 43: mild imperat. 2 pl. कहिअ, IV, 53: fut. 1 sg. कहबगग्र, II, 26: 2 sg. कहब, VII, 44: कहत, I, 34: past 1 sg. कहल, I, 39: IX, 70: 3 sg. कहल, I, 8: II, 34, 35: V, 27: VII, 30: VIII, 27, 34: IX, 25: कहलक, VIII, 21, 43: 3 pl. कहलन्हि, I, 28: III, 7, 8: V, 23, 30, 34: VI, 16, 19: VII, 32, 50: VIII, 5, 22, 23, 40, 45: IX, 22: verb. nouns dir. कहल, II, 20: VI, 41: obl. कहबाँ, I, 12: IX, 70: कहग्र, I, 14: II, 42: IV, 51: VI, 21: VII, 13: VIII, 24, 37: X, 3, 19: gen. कहग्रक, VIII, 3: indecl. part. कहि, I, 36: II, 13, 28, 36, 39, 60, 62: III, 8: V, 42, 49: VI, 25: VII, 17, 52, 59: IX, 56: adv. part. कहिनँदि, IX, 31.
कहिनो, II, 28: VI, 46, 47.
कञ, कञँ, sgn. of indecl. part. II, 12, *&c. see* √ कर.
कञ (in some places), IX, 6.
कञँ, sgn. of acc. X, 36.
काञ, see केओ.
कञखन, IV, 9, 10.
कौ, subst. nom. or dir. adj. कौ, III, 14, 16: VII, 53: IX, 41, 54: subst. acc. V, 25: dat. कथि लग्र, I, 37: instr. किग्र (why?) VII, 45: acc. indef. कौदञ, II, 54: कौदौं, IX, 9: adj. किदञ, IX, 44.
किरेक, V, 22.
किछु, I, 7, 12, 20, 39: II, 15, 29: IV, 39, 51: V, 42: VI, 42: VII, 14, 45, 49, 50: VIII, 3, 7, 8, 22, 24, 33, 48: IX, 20, 24, 47, 57, 60: X, 32: gen. कछुअक, II, 44.
किसलग्र, VIII, 32.
कुण्डल, VII, 24.
√ कुद, past 3 sg. कुदल, IV, 23, see √ कूद.
√ कूद, pres. 3 sg. कूदै, VII, 4: कूद, VII, 4: *see* √ कुद.
कुफार, VIII, 29.
कुबर, fem. कुबरि, VIII, 25.
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कुबुजा, VIII, 20, 26.
कुमङल, X, 37.
कुमार, I, 24, 25: fem. कुमारि, X, 1: कूमरि, I, 1.
कूमरि, *see* कुमार.
कुम्भकरन, IX, 32.
कुल, IV, 26: IX, 65: कूल, IX, 7.
कुसल, IV, 35: VII, 28, 30.
कुसुम, VII, 22: gen. कुसुमक, VII, 41: VIII, 15.
कुम्भो, IX, 2.

कण्ह, I, 2: II, 16: IV, 16, 29: V, 16, 22, 27, 31, 42, 59: VI, 11, 33: VII, 5, 6, 12, 49: VIII, 11, 26: IX, 12, 22, 36, 37, 39, 61, 69: nom. (with emph. ङँ, or (?) case of agent before transitive verb in past tense) कण्हङँ, V, 10: gen. कण्हक, IV, 34: V, 45, 57: VI, 4: VII, 9.
के, nom. subst. or der. adj. के, I, 16: II, 9, 11, 38, 42: V, 18: VIII, 37: IX, 27: X, 19, 29, 33: के, II, 60: केदङ, V, 58: gen. sg. dir. ककर, II, 58: V, 58.
कें, (sgn. of acc.) I, 25: IV, 60: VI, 22: VII, 36: IX, 64: के, (sgn. of dat.) IV, 2: कें, I, 30: II, 25: V, 34: VI, 19: VIII, 34: X, 20.
केथो, nom. sg. केथो, II, 7: IX, 9: केथा, II, 45, 47: III, 7: IV, 17, 20: V, 48, 51: VI, 5, 9: VII, 40, 42, 43, 45, 55: IX, 24: केथथो II, 45: ककरङँ, VII, 25: acc. sg. ककरउँ, VI, 30: obl. काउ, I, 7: dat. ककरउँ IV, 39: VIII, 33: gen. काउक, IV, 17.
केवल, IV, 16.
केसि, VI, 22: केसी, VI, 24, 25: VII, 6.
केहन, VII, 60.
कै, (How many?) II, 45: III, 2, 4, 6: IV, 43: V, 41: VI, 11: VII, 39: IX, 4, 34.
कै (sgn. of acc.) IV, 20.
कोक, IX, 52.
कोट, X, 11, 17, 50.
कोटि, V, 37: VII, 39: IX, 56.
कोठवार, gen. कोठवारक, IX, 3.
कोदरि, VII, 7.
कोन, nom. sg. subst. कोनउ, V, 59: कोनङँ, VI, 9: obl. subst. कोन, I, 3: obl. adj. कोन, III, 2: VII, 39: nom. subst. कोनें, VII, 37: see also के.
√ कोप, indecl. part. कोपि, IX, 41.
कोप, loc. कोपङँ, VII, 35.
कोपित, V, 26.
कोर, II, 14.
कोस, VII, 52.
√ कोडा (व), pres. 3 pl. कोडाथि, IV, 16.
कौड़ि, gen. कौड़िक, IV, 45.
कौनें, *see* कोन.
कौसल, III, 5: VIII, 31.
क्रित, VII, 24, 30: X, 24: क्रितारथ, VII, 58: VIII, 21.

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√ खा, pres. 3 sg. खाइ, IV, 38: 3 pl. खाथि, III, 4: VII, 14: fut. 3 pl. खेताइथन्हि, IV, 10: past 3 sg. खाइल, V, 11: VII, 18: 3 pl. खेलन्हि, V, 30: indecl. part. खाइ, VI, 38.
खगपति, IV, 55.
खागि, II, 44.
खट खट, VII, 2.
खड़ग, II, 6.
√ खण्ड, past 3 sg. खण्डल, V, 23.
खण्ड, IX, 5.
√ खन, past 3 sg. खनल, IX, 4.
खन, IV, 9, 10.
खाम्ह, VI, 46.
खर, V, 5.
खरब, VI, 47.
खल, V, 9: gen. खलक, X, 39.

खलमति, IV, 50.
खाली, IX, 34.
√ खस, pres. 3 sg. खसै, V, 3: खसु, II, 52: fut. 3 sg. खसत, V, 48: past 3 sg. खसल, III, 12, 14: VII, 57: indecl. part. खासि, X, 5.
√ खसा(व), past 3 pl. खसौलन्हि, VI, 13: IX, 45.
खिरि, VI, 38.
√ खिसिआ, indecl. part. खिसिआइ, IX, 47.
खूर, instr. खूरै, VII, 2.
√ खूल, indecl. part. खूलि, IX, 12.
खेड़ि, V, 12: खेड़ि, V, 14: gen. खेड़िक, IV, 9.
खेतीवाड़ी, V, 24.
√ खेद, fut. 1 sg. खेदब, VI, 27.
खेद, II, 37.
√ खेला, mild imperat. खेलाइअ, IX, 2: past 3 sg. खेलाइल, V, 14: VIII, 42: IX, 31.
खेला, IX, 26. [12.
√ खेला(व), past 3 pl. खेलौलन्हि, IX,
√ खो, pres. 3 sg. खोअ, fut. 3 sg. खोइत, VI, 20.
खोर, fem. खोरि, II, 18.

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√ गा(व), pres. 3 sg. गाव, II, 46: 3 pl. गावथि, IV, 10: past 3 sg. गाओल, IX, 61.
गइ (sign of fut.), II, 19, 26: *see* गै. (indecl part. of √ जा), *see* जा.
गाइ, III, 13, 17: V, 40, 50: VI, 7, 28.
गगन, II, 24.
गङ्गा, VII, 12.
गाछ, V, 4.
गज, VII, 21: IX, 13.
गाढ़, II, 6: IV, 44: V, 43: IX, 8.
गढ़पाल, X, 9.
√ गाँथ, pres. conj. 2 pl. गाँथिअ, II, 23: past part. गाँथल, VII, 41.
गात, IV, 27: gen. गातक, VII, 22.
गदा, II, 17: X, 34.
√ गन, pres. 3 sg. गनइ, VI, 33: fut. 3 sg. गनत, IV, 60: VI, 34: past part. with emph. ओ, गनलो, X, 42.
गन, II, 61: V, 1: VI, 48: VII, 20: X, 44, 46.
गनिका, IX, 6.
गनेस, VII, 45.
गाम, IV, 30, 31: VIII, 14, 19: gen. sg. गामक, VII, 55.
गमन, VII, 33, 41.
गमथनि, I, 23.
√ गर, past 3 sg. fem. गरलि, IV, 15: IX, 16.
गर, III, 1.
√ गरज, indecl. part. गरजि, II, 24.
गरज, X, 18.
गरद, X, 15.
गरदनि, IX, 34.
गरब, VI, 48.
गरभ, II, 14: *see* गर्भ.
गरुड़, gen. गरुड़क, IV, 54.
गर्भ, I, 29: *see* गरभ.
गल, V, 20. [47.
√ गह, indecl. part. गहि, IX, 13,
गह, IX, 4.
गीत, IV, 10, 62.
गिरि, I, 1, 16: IV, 6: V, 50, 54: VII, 9: गिरिधर, V, 54: गिरिवर, V, 25, 47.

√ गुड़क, past part. गुड़कल, III, 10.
गुदगर, IX, 4.
गुन, VIII, 32: IX, 60, 61: गून, VII, 59: gen. गूनक, VIII, 17.
गुरु, gen. गुरुक, VII, 24.
गेआन, III, 21.
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√ थम्ह, past. 3 sg. थम्हल, VIII, 3.
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√ थिक, pres. 3 sg. थिक, II, 9: V, 12: VII, 51: थोक, I, 4: VII, 3, 25: 3 pl. थिकाह, V, 58.
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√ दाप, indecl. part. दापि, VI, 9.
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√ दे, pres. 1 sg. दिअ, VII, 43 : 3 sg. देअ, II, 43 : VIII, 18 : IX, 34 : pres. 3 pl. देखि, IX, 36 : imperat. 2 sg. द, VIII, 10 : देखि, VI, 22 : 2 pl. दिअहो, I, 18 : II, 8 : दिअ, IV, 48 : V, 24 : fut. 1 sg. देब,

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✓ देख, pres. 1 देखि, III, 16 : conj. pres. 1 pl. देखिअ, VII, 51 : 3 sg. देखए, VII, 26 : fut. 2 pl. देखब, II, 32 : IX, 55 : 3 sg. देखत, IV, 55 : fem. देखति, VII, 58 : past 3 sg. देखल, I, 11 : VII, 19 : VIII, 2 : देखल, VII, 19, 20 : VIII, 4 : 3 pl. देखलन्हि, VIII, 8, 15, 29, देखलथन्हि, II, 53 : indecl. part. देखि, II, 17 : III, 15 : IV, 19, 30, 40, 45 : V, 4, 20, 45 : VI, 1 : VII, 8, 27 : VIII, 14, 18, 20, 35 : IX, 14, 21, 37, 43, 48 : X, 20 : देखि, VI, 9 : IX, 1, 20 : pres. part देखइत, VIII, 28 : adv. part. देखितहिँ, II, 61 : VII, 26.

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✓ दौड़, pres. 3 sg. दौड़, VI, 8 : past 3 sg.

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✓ धर, pres. sg. धरिअ, I, 5 : 3 pl. धरथि, IX, 37 : conj. pres. 3 pl.

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✓ निरख, indecl. part. निरखि, IX, 17.
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✓ नोरा, past 3 sg. नोराइल, III, 15 : fem. नोराइलि, V, 45.
✓ न्योत, indecl. part. न्योति, VI, 32.
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√ पसार, indecl. part. पसारि, II, 24.
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√ पऊँच, pres. 1 sg. पऊचिच, IX, 55 : past 3 sg. पऊँचल, IV, 32 : V, 2 : X, 51 : पऊचल, VII, 1, 18 : fem. पऊँचलि, III, 17 : X, 2 : imperat. 2 pl. पऊचौ, V, 48.
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√ हल, pres. 3 pl. हलथि, VIII, 25 : past 3 sg. हलल, V, 16 : VI, 12 : VIII, 7 : IX, 12, 45 : हललक, V, 7 : pl. हललन्हि, VI, 11 : IX, 39 : past part. हल, IX, 41.
हलधर, I, 31 : IV, 11, 14, 40 : V, 1, 4, 7, 9, 16, 17, 19 : VII, 29 : VIII, 2, 13 : IX, 15, 42, 49, 66 : X, 29, 33, 36.
हलायुध, X, 31.
हलु, II, 19, 31 : V, 1 : VI, 10 : VIII, 32 : X, 22.
√ हँस, pres. 3 pl. हसथि, III, 3 : past 3 sg. हसल, III, 12 : VI, 43 : VIII, 14 : indecl. past हँसि, VII, 28 : हसि, X, 29 : adv. part. हँसितहि, IX, 49 : हँसितहिँ, VII, 15 : हसितहिँ, V, 29 : verb. noun obl. हसए, V, 4.
हसि, IX, 13.
हिअ, III, 15 : VII, 33, 42 : हिए, X, 22.
हित, VI, 39.
हिमगिरि, I, 1.
हिरदए, IX, 47 : *see* ह्रिदए.
√ हिलाव, past 3 sg. हिलाओल, V, 4.
हुकुम, IX, 66.
√ हुल, indecl. part. हुलि, IX, 12.
हेठ, IX, 45.
हेतु, II, 56 : VI, 42, 43.
√ हेर, pres. 3 pl. हेरथि, II, 57 : indecl. part. हेरि, I, 14 : II, 31, verb. noun dir. with emph. ओ, हेरिओ, II, 38.
√ हेरा, past 3 sg. हेराएल, III, 15 : verb. noun instr. हेरैनँ, (for हेरैलँ,) III, 17.
√ हो, pres. 3 sg. होअए, X, 15 : होए, X, 32, 49 : होए, X, 45 : होअ VII, 26 : VIII, 30 : IX, 10, 38, 54 : होअ, II, 38 : IX, 18 : X, 6 : pl. होअथि, VIII, 4 : pres. conj. 3 sg. होअ, I, 4 : होअ, II, 10 : VII, 26 : IX, 55 : imperat. 2 pl. होउ, V, 17 : 3 sg. होअओ, VII, 60 : fut. 3 sg. होत, I, 4 : VII, 32 : होइत, III, 14 : X, 35 : होएत, VI, 20 : X, 22, 33 : होइ, VIII, 47 : past 1 sg. भेलऊँ, IV, 53 : 3 sg. भेल, I, 9, 22, 24 : II, 14, 27, 42 : III, 5, 16 : IV, 28, 42, 44, 45,

49, 51 : V, 50, 51, 58 : VI, 3, 40, 43 : VII, 6, 11, 16, 41, 59 : VIII, 47 : IX, 5, 8, 25, 33, 38, 50 : X, 14, 39, 44, 45, 53, 54 : भेल, I, 7, 19, 23, 26 : II, 3, 13, 21, 39, 47, 62 : III, 1, 12 : IV, 8, 9, 14, 35, 47, 58, 62 : V, 15, 21, 31, 53 : VI, 5, 14, 40 : VIII, 26 : IX, 44, 53, 60 : X, 8, 28, 37, 43, 50 : भेलइ, V, 12 : fem. भेलि, I, 12 : II, 26 : VII, 43, 52 : IX, 19 : भेलि, I, 6 : II, 56 : III, 19 : VII, 55 : pl. masc. भेलाह, II, 12 : X, 31 : fem. भेलिह, III, 9 : periphrast. pres. होइबिअ, V, 22 : 3 sg. होइहि, IV, 4 : IX, 2 : past part. भेल, V, 54 : indecl. part. भे, X, 23 : भै, II, 55, 59 : IV, 32, 43, 48 : VII, 1, 44 : IX, 10, 40 : X, 37 : भइ, I, 32 : V, 7, 27 : VI, 3, 36 : VII, 42, 53, 54 : VIII, 6, 8, 17, 23 : IX, 41 : verb. noun. obl. होमइ, X, 4, 6 : होमइ, X, 35.

होअ, VII, 1.

ह्रद, IV, 19, 20, 28, 38, 57, 58 : *see* हरद.

ह्रिदइ, I, 5 : II, 48, 54 : III, 18 : IV, 19 : VII, 25, 36 : IX, 25, 37 : X, 22 : obl. ह्रिदयाँ, VIII, 48 : *see* हिरदइ.

Errata to Man'bodh's Haribans.

TEXT.

Introduction.

p. 130, l. 8 from bottom, *read* बन्हलन्हि.

Text.

I, 30, *read* सङ्करखित.
II, 7, „ अँगना.
10, „ सन्सइ.
22, *for* सब, *read* सभ.
45, *read* अँगना.
III, 2, „ अँगनऊँ सौं बहराथि.
7, „ टाँग.
15, „ आँगन.
IV, 4, „ होइहि.
15, „ अहिगरलि.
17, „ मन ऊनकहि.
21, *read* सिखा.
25, „ घेरि लेलक.
39, „ करइक.
V, 11, „ आँगन.
31, „ आँगन.
55, „ जेहन देब.
VI, 2, „ सङ्ग फूल काँ
3, „ भइ.
5, „ मङ्गल.
7, „ सतबितहि.
8, „ सुँदले.

VI, 11, *read* मुँदि.
26, ,, बिरताँत.
41, ,, अँगिरि.
43, ,, अँगिकार.
45, ,, अवतरव.
VII, 15, ,, देवक.
30, ,, अवसेख न.
36, ,, भुसा.
43, ,, अँगना.
VIII, 16, ,, मँगलन्हि.
26, ,, भेल.
34, *for* क (in some copies) *read* कें.
41, *read* देस.
44, ,, बिरिताँत.
46, *read* अवहरव.
IX, 16, ,, अहिगरनि.
28, ,, हारि जीति.
37, ,, ओहो जोगाव.
39, ,, रङ्कि.
42, ,, परि हरि.
63, ,, परम बरह्म.
65, ,, अनुताप.
67, ,, सिँघासन.
X, ,, दै बरु होअ होमए.
12, ,, मथुरा.
17, ,, बटेरि.
48, ,, ढाल, भासल.
49, ,, बटोरताह.

TRANSLATION.

p. 2, note [1], l. 7, *for* गोग, *read* गोट.

p. 30, note [2], add, see X, 20.

p. 35, note [1], add, see note [2], p. 30.

INDEX.

p. 38, after art. ✓ अकुला, add as a new art. आकित, VII, 24.

ib. art. ✓ अट, omit the entry IX, 20: , and add, verb. noun अटल, IX, 20.

p. 39, art. ✓ अवतर, after VI, 45, add, 46.

p. 43, col. 2, l. 25, after IV, add 43,.

p. 50, art. जीति, *for* 29, *read* 28.

p. 68, col. 2, l. 21, *for* 63, *read* 62.

Twenty-one Vaishṇava Hymns.—Edited and translated by G. A. Grierson, C. S.

All the following hymns are in the Maithilí dialect of the Bihárí language. Mithilá boasts of a long series of vernacular authors commencing with the famous Bidyápati who flourished at the end of the 14th century, and ending with many living poets like Bhánunáth and Harkhnáth.

I have endeavoured to make the present short selection as representative as possible, and have therefore given samples of the poetry of fourteen different writers. Of most of these poets little is known even by tradition. Jayadeb must be one of the oldest, for according to the hymn herein quoted, he sang before king Sib Singh, who was Bidyápati's patron. Concerning the patrons of the other poets, except those of Bhánunáth and Harkhnáth no information is available. Maheśwara Singh, mentioned by the former was the father of the present Mahárái Báhádur of Darbhangá, and Harkhnáth addresses the present Mahárái himself.

On another occasion I may perhaps have time to arrange the materials which I have accumulated regarding the ancient kings of Mithilá. The present article can only be taken as showing that poems by several writers of very varying dates, who were natives of that country, are still extant.

These poems partake of the usual character of Vaishṇava hymns concerning which I have treated at some length in the Introduction to Bidyápati's poems in my Maithil Chrestomathy.* Suffice it here to say that the relationship of God to the soul is always exhibited as that of a lover to his beloved. The lover is represented by Kṛishṇa, and the beloved by Rádhá or some other Gopí of Vraja. Kṛishṇa, it need hardly be mentioned, appears under various aliases, such as Murári, Hari or Yadupati.

I.

Umápati.

In the following hymn, God is shown as entreating the soul to abandon itself to him.

अरुन पुरुब दिसि, बहलि सगर निसि, गगन मगन भेल चन्दा ।
मुनि गेलि कुमुदिनि, तइओ तोहर, धनि, मूनल मुख अरबिन्दा ॥
कमल बदन, कुबलय दुऊ लोचन, अधर मधुरि निरमाने ।
सकल सरीर कुसुम तुअ सिरजल, किअ तुअ हृदय पखाने ॥

* J. A. S. B., Extra Number, Part I for 1880.

असकति कर कङ्कन नहिँ परिहसि, हृदय हार भेल भारे।
गिरि सम गरुअ मान नहिँ मुञ्चसि, अपरुब तुअ व्यवहारे॥
अवगुन परिहरि हरखि हेरु, धनि, मानक अवधि विहाने।
सुमति उमापति सकल त्रिपति पति हिन्दू पति रस जाने॥ १॥

Translation 1.

1. The dawn hath appeared in the east, the whole night hath flowed away, the moon hath disappeared in the sky. The waterlily* hath closed, and yet, O Lady, thy lotus face is unopened.

2. Thy countenance is like unto the lotus, and thine eyes the dark-blue lily. Thy lip resembleth the carnation.† Thy whole body hath been created of flowers. Why, then, is thy heart of stone?

3. Because thou faintest, thou wearest not the bracelet on thine arm; and (thou complainest that) that the necklace o'er thy heart is too heavy. Yet the burden of scorn which is weighty as a mountain thou throwest not off. Strange are thy ways.

4. Give up thy waywardness, and gaze upon me joyfully, O Lady. Let the sunrise be the end of thy scorn. Saith the wise Umápati, The king of kings, the Lord of the Hindús, knoweth every sentiment.

II.

Subject—the same as the preceding.

मानिनि मानह जौँ मोर दोसे। सान्ति करिअ, वर न करिअ रोसे॥
भौँह कमान विलोकन बाने। बेधह विधु मुखि कय समधाने॥
पीन पयोधर गिरि वर साधी। बाहुँ फाँस, धनि, धर मोहि बाँधी॥
की परिनति भय परसनि होही। भूखन चरन कमल देँह मोही॥
सुमति उमापति भन परमाने। जग माता हिन्दू पति जाने॥ २॥

Translation 2.

1. O proud one, if thou art angry at my fault, be appeased, and show not wrath.

2. Thy brow is a bow, and thy glances arrows. String thy bow and strike me, O moon-faced one.

3. Consider thy firm bosom as a great mountain,‡ and bind me to it, Lady, with thine arms for bonds.

* The waterlily is supposed only to open its flowers by night, and the lotus by day.

† The *Madhuri* is a flower of a deep carmine colour,—*Pentapetes phœnicia.*

‡ *Cf.* Bid. 53, 5, 6.

4. With what act of submission wilt thou be pleased? Place thy lotus feet upon my body (and they will be but) an ornament to me (and not a penance).

5. The wise Umápati saith a true saying. The Lord of the Hindús knoweth the mother of the universe.

III.

Here, the distress of the soul imagining itself to be deserted by God is allegorically depicted.

सखि हे मन जनु करिअ मलाने ।
अपन करम फल हम उपभोगब, तोहें किअ तजह पराने ॥
हरि सँ प्रेम आस करि लाओलि, पाओलि परिभव ठामे ।
जलधर छाहरि तर हम सुतलऊँ, आतप भेल परिनामे ॥
कबऊ नेह नहिँ पुनु परगासब, केवल फल अपमाने ।
बेरि सहस दस अमिअ भिँजाबिअ, कोमल हो न पखाने ॥
पुरुब पिरिति रिति ऊनि जौँ बिसरल, रति ऊ न ऊनकर दोसे ।
कतन जतन धरि जौँ प्रतिपालय, साप न मानय पोसे ॥
सुमति उमापति हरि होंइत परसन, मान होंइत अवसाने ।
सकल विपति पति हिन्दू पति जिउ, पट महिखी बिरमाने ॥ ३ ॥

Translation 3.

1. O friend, be not unhappy. I shall but enjoy the fruit of my own fate. Wherefore dost thou give up thy life (in sorrow for me)?

2. Hopefully did I bring my love to Hari, and there I obtained but disappointment. I slept beneath the shade of a cloud, (but it passed away and) in the end the burning (rays of the sun fell upon me).

3. Never again will I reveal my love, for its only fruit is slighting. If thou moisten a stone ten thousand times with ambrosia, never couldst thou soften it.

4. If he have forgotten the manner of his former love, the fault is not his in the least* (but that of his inborn nature). Even as if thou wert to cherish a snake with many efforts, still it would not remember thy tender care.

5. The wise Umápati saith, Hari will be appeased, and (the sun of) his pride will set. May the king of all kings, the Lord of the Hindús live, and with him the queen† in whom his heart delights.

* रति ऊ 'not even a *rati*' or 'small weight.'

† पट महिखी is the principal queen who sits on the throne with her husband and was proclaimed queen at the time that he was proclaimed king.

IV.

Nandípati.

Subject,—the same as the preceding.

माधव एहन दिवस भेल मोरा।
अपन करम फल हम उपभोगब, ताहि दोस कोन तोरा॥
जाहि नगर चानन नहिँ चीन्हथि, अड़ड़ आंदर के रोपे।
बिनु गुन बुझलँ जनिक अनादर, उचित न ता पर कोपे॥
सगुन पुरुख निरगुन नीनल जौँ, जीवन जड़ के देला।
जौँ करमी फुल सबज सराहिए, तौँ कि कमल गुन गेला॥
थल गुन आन ठाम परगासल, तैँ की तनिक अभेला।
गिरि दरि ताहि तिमिर रज ता पर, रवि महिमा छिन भेला॥
जनिक सरस मन ताहि कहिए गुन, पसु सिसु अबुध न बूझे।
नन्दीपति भन तैँ देखु दरपन, आन्हर काँ की सूझे॥ ४॥

Translation 4.

1. O Mádhab, such is the day which hath come to me. I shall but enjoy the fruit of mine own fate, and what fault is that of thine?

2. In the city where the sandal tree is not known, there they plant the castor tree with honour. He who showeth dishonour through not understanding qualities, on him anger is unseemly.

3. If he who is void of qualities blamed the man who possesses good ones, and showed favour* to a fool,—If all men praise the *kar'mí*,† are the virtues of the lotus less on that account?

4. If one's fixed qualities were displayed (not in his presence, but) elsewhere, was he therefore heedless (for not perceiving them). If a man remain in the darkness of a mountain cleft, is the might of the sun diminished thereby?

5. Describe qualities to one who hath an intelligent mind; beasts, children and the ignorant cannot appreciate them. Saith Nandípati, if a blind man look in a mirror, what doth he see?

V.

The following song refers to the famous lesson which Kṛishṇa gave to the Gopís that they must come to God naked and not ashamed, and must give themselves to him unreservedly.

अम्बर धएल उतारी। सेँ लए कदम तरु चढ़ल मुरारी॥
अभरन एक बरु लैहे। हरि परिधान बसन मोर दैहे॥

* *Lit.* 'gave livelihood.'

† A small white creeper that grows in marshes.

सबहि सखी पट पाऊ। हमर हि किय प्रतिखन बिलमाऊ ॥
हम ऊ बुझिय तोंर भावे। से मन बासि करिय हरि आवे ॥
मोंर मुख अवइछि आगी। तोहें करह हरि ततवय लागी ॥
नन्दीपति कवि गावे। नन्द तनय रसमय बुझ भावे ॥ ५ ॥

Translation 5.

1. They took off their garments, and laid them (on the shore,) and Marári climbed with them into the *kadamb* tree.

2. 'Take an ornament from me, but, O Hari, give me my wearing apparel.

3. 'All my companions have got their garments. Why dost thou delay me only so long?

4. 'I know thine object. O Hari, do now what is in thy heart.

5. 'To my face comes fire. O Hari, thou art doing this to make me angry with thee.'

6. The poet Nandípati sings; Hari the son of Nanda knoweth a nature full of sentiment.

VI.

In the following hymn the first occasion on which a soul gives itself unreservedly up to God, and its misgivings, are described under the similitude of a bridal night. The bridegroom represents the deity, and the bride the soul.

भाङ्ग* चाह चिकुर भर, सजनी, सहजहि दूवर देह।
प्रथमहिं पञ्च सँ समागम, सजनी, उपजल अधिक सनेह ॥
दुर सँ सूतलि बिमुखि भग्न, सजनी, बिरल बसन मुख झाँपि।
अभिनव केलिक नामहि, सजनी, नहिँ नहिँ कम्प उठि काँपि ॥
नूपुर काढ़ि नड़ाओल, सजनी, हरल बसन अवसेखि।
भाव भरल नव नागर, सजनी, अति उनमत भेल देखि ॥
नयन नीर भरि बाजलि, सजनी, भल सपथक निरवाह।
नागर न बूझ नारि दुख, सजनी, केवल निज सुख चाह ॥
नन्दीपति कवि गाओल, सजनी, यैह उचित प्रहि ठाम।
साहस तह पुनु लज्ज थिक, सजनी, सुखद होएत परिनाम ॥ ६ ॥

Translation 6.

1. The weight of my tresses, O friend, is on the point of breaking my naturally slim body. When I first met my husband, a great love sprang up within my heart.

* भाङ्ग is an optional way of writing भाँग्ग.

2. I slept far from him and turned my face away, concealing it under my scanty raiment, and when I heard the mere name of young dalliance, I rose trembling and said, 'No, No.'

3. He took off my anklets and cast them aside, and removed all my garments. The young bridegroom's love increased, and I saw him very frantic.

4. Mine eyes filled with tears as I cried; 'this is a fine fulfilment of thine oaths.' But, O friend, a lover doth not understand a woman's grief, he only seeketh his own pleasure.

5. The Poet Nandípati sang, this was proper at the time and place, but, with courage, the pangs are light, and the end will be full of pleasure.

VII.

In the following hymn, a Gopí complains to Yaśodá of the wantonness of the infant Kṛishṇa.

जसोंमति मोंर उपरागे। हरिक चरित मोहि बड़ मंन्द लागे॥
जाइत जमुनां पथ आजे। बन सँ बाहर भेल जुवराजे॥
आँचर धएलन्हि मोरा। काल्हुक जनमल तोंहर किसोरा॥
तखनुक तसु व्यवहारे। आंव कि कहब हम अपन कपारे॥
कोर सूंतल तोंर कान्हे। तैं जनु बूझह हरि कथि नान्हे॥
प्रतय करथि तन पाने। ओतय कटैकथि तरुनक काने॥
नन्दीपति कवि गाई। जननि जसोमति नहिं पतिआई॥ ७॥

Translation 7.

1. O Yaśodá, it is my calamity. Hari's actions appear very wicked to me.

2. To-day as I was going to the river Yamuná, the prince appeared from the wood.

3. Thy darling who was born but yesterday, caught the hem of my garment.

4. What am I to say now about my fate, and of how he then conducted himself?

5. He sleepeth in thy lap, but do not therefore think that Hari is a baby.

6. Here he drinketh from the body, and there he is able to outwit* a full-grown man.

7. The poet Nandípati singeth. His mother Yaśodá did not believe her.

* कान काटब 'to cut the ear,' hence 'to outwit.'

VIII.

In the next song, faith in God is shown as the one boat in which the troubled Sea of Existence can be crossed. A Gopí is represented as asking Kṛishṇa to ferry her across the Yamuná.

हरि हे अति आकुल मन मोरा। कतेक सहब दुख कौतुक तोरा॥
प्रहि जमुना जल कतऊ न थाहे। लप्र ग्रिम हार पार भप्र जाहे॥
चऊ दिस घन बुंन्द बरिसप्र मेहा। अब कि करब सखि जिब ऊ संन्देहा॥
झाँझरि नाव टुटल करुआरे। कोंन विधि उतरब प्रहो भव पारे॥
सभ सखि मिलि बैसलि* हियां हारी। बिनु रें पुरुख पथ न चढ़िप्र नारी॥
नन्दीपति जल बीचि अपार। डगमग नैयां करु माँझहि धार॥ ८॥

Translation 8.

1. O Hari, my mind is much distraught. How much anxiety, which is thy sport, am I to bear?

2. The water of this Yamuná is nowhere fordable, take this necklace (as a fee) and pass over with me.

3. All round the clouds are raining heavy drops. What, O my companion, can I do? There is doubt if even (I shall keep my) life.

4. The boat is full of holes, and the oars are broken. How shall I pass over this sea of existence?

5. All my companions have sat down hopeless, for without a man† a woman dare not mount the path. Nandípati saith, the waves (appear) impassable, and in the midst of the stream the boat is moving to and fro.

IX.

Mod Naráyan.

The following Hymn illustrates the utter abandonment of the soul to God and God's love for the individual soul, as illustrated by Kṛishṇa's love for Rádhá.

जमुना तीर कदम तर हे, प्रक अतरज देखी।
तड़ित जलद जनु अवतर हे, प्रक रूप विसेखी॥
राधा रूप मगनि भेलि हे, कर धै हरि आनी।
कतेक जतन कटु भाखिअ हे, नहिं बोलथि सयानी॥
अनुपम लोचन खञ्जन हे, बाँकऊ हरि हेरी।
बदन बसन अभिनत कै हे, मुसुकलि प्रक बेरी॥

* Another reading is सबऊ सखी बैसलि.

† Or (allegorically) the Man of Ages.

काम कला गुन आगरि हे, बैसलि मुख फेरी।
रङ्ग समान फिरथि हरि हे, जनि रतनक ढेरी॥
थिर नहिँ रहत मुगुध मन हे, जौबन जग साले।
आलींगन रस पसरल हे, पुलकित बनमाले॥
त्रिपति प्रताप भन अवतरु हे, नव तरु पचमाने।
मोद नराएन मन दए हे, सेआमे रस जाने॥ ९॥

Translation 9.

1. On the bank of the Yamuná, at the foot of the Kadamba tree I saw a wondrous sight. It was as if the lightning and its cloud had become incarnate in one lovely form.

2. Rádhá (on seeing) his beauty became intoxicated with love as Hari took her hand and drew her to himself. Even cruel words spake he (to draw forth a reply from her), but the wise damsel answered not.

3. Her matchless eyes were like the *khañjan*,* and with them she glanced sidelong at Hari. She lowered the cloth across her face and gave one smile.

4. Wise in the arts of love she sat with her face turned aside, while Hari walketh round her, as a miser walketh round a heap of jewels.

5. A mind full of love will not remain steady. The (ardour of) youth woundeth every one in this world. The delights of embraces were spread out (before him), and Banmáli (Kṛishṇa) thrilled with affection.

6. King Pratáp Singh, otherwise known as Mod Naráyan† payeth heed and saith, Love hath become incarnate in young trees,‡ and Syám (Kṛishṇa) understandeth it.

X.

Ramápati.

The following treats of the pangs experienced when the soul fancies itself deserted by God.

प्रथमहिँ, ओ रे, ससि मुखि परिजन मुख सुन।
ओ की, तुअ गुन अनुकन नेह उपज दुन॥
बिधि बस, ओ रे, बदन इन्दु तुअ देँखि धनि।
ओ की, भेँलि जनि प्रेम पयोनिधि निगमनि॥

* A bird, *Motacilla alba*.

† This is the traditional interpretation.

‡ *I. e.*, at the time of sprouting of leaves, as in the English Spring, love acquires greater power in the human breast.

अकमित, ओ रे, कोकिल पञ्चम कल धुनि ।
ओ की, सेह सुनि पुनु पुनु मुरुछ दुसह गुनि ॥
तलपहिँ, ओ रे, अति कोमल नलिनी दल ।
ओ की, दिअ भल परम दगध होअ अनुपल ॥
अवधिऊँ, ओ रे, न मिलत जदि निरदय हरि ।
ओ की, छन भरि न जिउति आलि कोनऊ परि ॥
सुनु धनि, ओ रे, सुमति रमापति बुझि कह ।
ओ की, थिर रह पुरत मनोरथ हरि तह ॥ १० ॥

Translation 10.

1. At first, alas, the moon-faced one heard of thy virtues from her friends, and at every moment a twofold love for thee ariseth in her heart.

2. By chance, alas, the Lady saw thy moon face, and became as it were plunged* in a sea of love.

3. Of a sudden, alas, she heareth the song of the cuckoo† in the fifth scale, again and again the lovely one fainteth, as she findeth it unbearable.

4. Alas, the tender lotus leaf becometh‡ always quite burnt in a moment when laid upon her bed.

5. If, alas, Hari, thou art pitiless, and wilt not meet her at the appointed time, the maiden will not live by any means even for an instant.

6. Saith the wise Ramápati, hear, O Lady, be patient, and thy desires will be fulfilled by Hari.§

XI.

Mahipati.

In the following hymn, the state of uncertainty of a soul first convinced of its sin, is described under the illustration of a Gopí who desires to meet Kṛishṇa, and yet does not wish to leave her husband and relations.

* निगमनि is feminine of निगमन *per metathesin* for निमग्न

† The song of this bird is supposed to be an incentive to love.

‡ *I. e.*, the lotus leaves were laid upon the bed to cool her body, but the heat of her anguish was so great that it burnt them up, तलपहिँ is locative of तलप Skr. तल्प a 'bed.'

§ तह is the sign of the instrumental case.

पचसर लख सर साज ना, कि कहब पञ्च नां समाज ना ॥
हरि हरि करु कत बेरि ना, मुरुझि खसू पथ हेरि ना ॥
आंखल जमुनां जल बाढ़ि ना, भेलऊँ कदम तर ठाढ़ि ना ॥
आंब कि करब सिर धूनि ना, कोकिल कल रव सूनि ना ॥
कवि महिपति इहो भान ना, जगत बन्धु रस जान ना ॥ ११ ॥

Translation 11.

1. The five-arrowed god of love aimeth his arrow at me, what can I say to my husband and his company?

2. Many times cried I 'Hari, Hari,' and fainting I fell down as I looked for his path.

3. The waters of the Yamunná have risen, and I am standing at the foot of the *kadamba* tree.

4. What can I do now by beating my head in anguish, as I hear the musical cry of the cuckoo.

5. The poet Mahipati saith the Friend of the world understandeth thy love.

XII.

Jayánand.

In this song, the grief of a soul which fancies itself deserted by God is described.

चौदिस हरि पथ हेँरि हेँरि, नयन बहञ जल धार ।
भवन न भाव दिवस निसि, करब कओन परकार ॥
ऊनि हम तिलऊ न आँतर, दुऊक प्रान कुल एक ।
परदेँस गञ निरदय भेँल, कि कहब तनिक बिबेक ॥
कुदिवस रहत कतेक दिन, के मोहि कहत बुझाञ ।
बिह बिपरीत भेल अब, के मोहि होंञत सहाञ ॥
करन जयानंन्द गाओल, चित जनु करिअ उदास ।
धेरज सभ तह बर थिक, आओत भमर अवास ॥ १२ ॥

Translation 12.

1. In all directions, I gaze, I gaze, upon the way for Hari, and there poureth from mine eyes a stream of tears. My home no longer pleaseth me night or day; what am I to do?

2. Between him and me there was not the difference of a grain of sesamum, our very breaths were one. Yet he went away pitilessly to a far country. What can I say of his wisdom?

3. How many days will this ill day remain? Who will tell me and explain? O friend, the Creator hath become opposed to me. Who will be my help?

4. Jayánand the Karan Kayasth sang, be not mournful in thy heart. Patience is best of all. The bee will come to its home.

XIII.

Bhánunáth.

In the following song the allegory is the same as in the last.

जदुपति बुझिअ बिचारी। अभिनव बिरह बेआकुलि नारी॥
नलिन सयन नहिँ भावे। तनि पथ हेरइत दिवस गमावे॥
केअओ चांनन कर लेपे। केअओ कहए जनि रहल सँक्षेपे॥
कोन परि करति निवाहे। सित कर किरन सतत करु दाहे॥
तप जनि करए सकामे। निस दिन जपइत रह तसु नामे॥
भानुनाथ कवि भाने। रस बुझ महेखर सिङ्ह सुजाने॥ १३॥

Translation 13.

1. Learn and understand the ways of Yadupati (Kṛishṇa.) The Lady is distraught with the fresh separation.

2. A bed of lotuses pleaseth her not. Gazing at his path she passeth the day.

3. Some are anointing her body with (cooling) sandal paste and some say that there is but little life* in her.

4. To what can she have recourse? Even the cool rays of the moon continually burn her.

5. She is as it were performing a penance with a fixed desire; for night and day she utters but his name.

6. Saith the poet Bhánunáth, the wise Maheśwar Singh understands the sentiment.

XIV.

Chaturbhuj.

An allegory explaining desire for communion of the soul with God.

नव तनु नव अनुराग, माधव, नव परिचय रस जाग॥
अभिनव प्रकओ न भाख, माधव, दुज मन गौरव राख॥

* जनि here means 'life,' the Skr. जनी 'birth.'

दिन दिन दुऊ तन छीन, माधव, कें जांन बितत कत दीन ॥
दुऊ मन बसु एक काज, माधव, आँतर भै रऊ लाज ॥
हिदय धरिअ जत गोइ, माधव, नयन बेकत तत होइ ॥
चतुर चतुर्भुज भान, माधव, प्रेम न होंअय पुरान ॥ १४ ॥

Translation 14.

Refrain. Ah Mádhab.

1. The forms of both are young, and so is their passion. The young recognition of love is awaking.

2. Neither of the young ones speaketh, for both have pride in their minds.

3. Daily the bodies of both are fading away. Who knoweth how many days must (thus) be passed.

4. Both minds dwell on one employment, but modesty stands between them.

5. The more she concealeth her love within her heart,—the more will it become manifested by her eyes.

6. Saith the skilful Chaturbhuj. Their love never groweth old.

XV.

Saras Rám.

The beauty of the soul. This hymn is apparently taken from some religious drama, and was sung on the entrance of Rádhá.

देल परबेस परम सुकुमारि। हस्ति गमनि त्रिखभानु दुलारि ॥
तनु अनुपम आनन सानन्द। दामिनि उपर उगल नब चन्द ॥
नासा ललित नयन नहिँ थीर। जनि तिल फुल अलि दुऊ दिस फीर ॥
भाडि जांग्रत कुच भर परिनाम। तें जनि चिबलि गुन बान्हल काम ॥
सरस राम भन राधा रूप। रस बुझ रसमय सुन्दर भूप ॥ १५ ॥

Translation 15.

1. The exceedingly tender one entered,—the beloved of Brikhbhánu, with the elephant gait.

2. Her body is matchless and her face suffused with joy, like the new moon rising over the summer lightning.

3. By her nose her playful eyes remain not steady, as bees surround each side of the sesamum flower.

4. Her full bosom would assuredly break, if love had not tied it with the string of three fair folds below.

5. Saras Rám telleth of Rádha's beauty, and king Sundar knoweth the sentiment.

XVI.

JAYADEB.

The soul is described as being on the point of abandoning itself to God.

सुन्दरि करिअ तोरित अभिसारे ।
अवहि उगत ससि तिमिर तेजत निसि, उसरत मदन पसारे ॥
बदन कामिनि हे बेकत न करिए, चौदिस होएत उजोरे ॥
चानक भरम अमिअ रस लालच, एँठ कए जाएत चकोरे ॥
अमिअ बचन भरमइ जनु बाजह, सौरभ बूझत आने ॥
पङ्कज लोभ भमर चल आओत, करत अधर मधु पाने ॥
तोहे रस कामिनि मधु के जामिनि, गेल चाहिअ निज गेहे ॥
राजा सिव सिंह रूप नारायन, कवि अभिनव जयदेवे ॥ १६ ॥

Translation 16.

1. Fair one, haste to the love-meeting. Even now will the moon arise. Darkness will desert the night, and the means of obtaining* love be removed.

2. Lovely one, expose not thy face, or on all sides will there be a bright light. The Chakor† will take thy face for the risen moon, and covetous of thine ambrosia, will coaxingly (approach you, taste it) and go away.

3. Speak not inadvertently with thine ambrosial voice, or others will think it nectar. When the bee seeth thy face he will take it for an open waterlily, and will sip the honey of thy lower lip.

4. Thou art desirous of love and it is a night in the month of Chaitra.‡ (So haste) as thou desirest to return home. The new poet Jayadeb sang this before Rája Sib Singh Rúp Náráyan.

* पसार, *literally*, 'a shop.'

† The Greek partridge, *Perdix rufa*, said to be enamoured of the moon, and to exist on moonbeams, and the ambrosia contained in it.

‡ March-April. In this month people are supposed to be inclined to oversleep themselves. She is hence warned not to oversleep herself, or she will have to return after sunrise, and her absence will be observed.

XVII.

Kes'ab.

In the following the distress of the soul on fancying itself deserted by God is described.

सुनह बचन सखि मन दग्ध, दहग्ध चाँहग्ध तनु आज ।
पबन परस तरसग्ध जिब, मदन दहन सर साज ॥
कोंन परि उबरब हरि हरि, धैरज धरि धरि लाख ।
छन छन मुरछि मुरछि खसु, सखि न जिउति सखि भाख ॥
कि करब सुनि सुनि पिक रब, निक रब मोहि न सोहाग्ध ।
हहरि हहरि हरि हरि कग्ध, निरदय आंज ऊ न आग्ध ॥
सखि सेंज खिजह नलिनि दल, तेंऊँ तह होंअ अवसान ।
बन कुऊकग्ध घन सिखि गन, सुनि सुनि दह दुनु कान ॥
धरम करम बिकुड़ल मोंर, पुरब कग्धल कत पाप ।
धैरज धै रऊ केसब, रस बुझ बिपति प्रताप ॥ १७ ॥

Translation 17.

1. O friend, take heed unto my words, my body is about to be consumed to-day. My life longeth for the touch of air, as love setteth in array his fiery darts.

2. How can I, ah Hari, Hari, come out of my difficulties, even though I take patience ten thousand times. Every minute I faint, I faint and fall, 'thy friend,' saith thy friend, 'can live no longer.'

3. As I hear, as I hear the cry of the cuckoo, what am I to do? Its sweet sound no longer pleaseth me. Lamenting, lamenting I call on Hari, but the pitiless one hath not yet come.

4. O friend, thou art making a (cool) bed of lotuses for me, that from it I may be cured.* When I hear, when I hear the peacocks crying in the dense forest, both mine ears are consumed.

5. The fruit of my virtue and of my good deeds hath disappeared. In some former existence I must have committed many sins.† Saith Keśab, bear patience, king Prataáp understandeth love.

* अवसान or ओसान is often used to mean 'a cure.'

† Under the doctrine of transmigration sins committed in one life follow one with their consequences in a future life.

XVIII.

Bhanjan.

Subject, the same as the preceding.

प्रकसरि कोन परि हरि हरि, तरब बिरह नदि पारे।
कतऊ न देखिअ जदु पति, जनि बिनु जगत अन्हारे॥
के हित हमर जगति तल, जें कर एकर उपचारे।
छन छन तनु अवसन होअ, परल बिरह दुख भारे॥
कि करब कतय जाएब दऊ, कोन तह होएत उधारे।
चान किरन तन तापए, आंव न जिवन परकारे॥
न कर बिजन नलिनी दल, सखि न सिचह घनसारे।
मोरा लेखें तन बरिसए, अबिरल निधुम अँगारे॥
काहि कहब परिबेदन, हनए मदन दुरवारे।
बिसरि बे सल मोहि जदु पति, कि करब सगन बिचारे॥
कह कबि सेखर भञ्जन, लिखल मेंटए के पारे।
बिपद बिभव दुऊ थिर नहिँ, अचिर मिलत गुन सारे॥ १८॥

Translation 18.

1. O Hari, Hari, how can I pass over the river of separation alone. Nowhere do I see Kṛishṇa, without whom all the world is dark.

2. Who is there my friend upon this earth, on whose hand I can count in this? Every moment my body becometh prostrate, and falleth under the weight of the grief of separation.

3. What can I do? where can I go? From whence will come my salvation? The very rays of the moon scorch my body. Now I have no means by which to live.

4. Fan me not with lotus leaves, O friend, nor sprinkle me with camphor. To me (even these cooling applications) seem as if it were raining ceaseless (burning) smokeless coals upon my body.

5. To whom shall I tell my woes, for Love Invincible is slaying me. Kṛishṇa hath forgotten and deserted me. What can I do, hoping against hope?*

6. Saith Bhañjan, the chief of poets, Who can wipe out what hath been written in the book of fate? Misfortune and wealth are both fleeting. Before long the essence of all virtues will meet thee.

* *Lit.* What shall I do with calculating good omens (as to the future). **सगुन बिचारब** means 'to calculate the future from omens.'

XIX.

The next hymn, by the same author, deals with the same subject.

पाओस निअर तुलाएल, सजनी, कि कहब पहु नहिँ आएल ॥
गगन गरज नव जलधर, सजनी, बन बन सिखि गन रव कर ॥
कोन सखि आब उपदेसह, सजनी, एहन बिरह दुख के सह ॥
पिया सङ्ग रभसय कामिनि, सजनी, मोरा लेखे जुग सम जामिनि ॥
धैरज धरह कलावति, सजनी, आए मिलत मधुरा पति ॥
कवि भञ्जन एहो गाओल, सजनी, कमलिनि मधु कर पाओल ॥ १९ ॥

Tanslation 19.

1. The rainy season hath come near, my friend, what am I to say? for my Lord hath not come.

2. The new clouds thunder in the sky, and the peacocks are crying in the forest.

3. What advice dost thou give me now, my friend? Who can bear such pangs of separation?

4. Other damsels have sported with their loved ones, but for me a single night appeareth an æon.

5. Fair one, be patient. Kṛishṇa, the lord of Mathurá will come and meet thee.

6. The poet Bhañjan sang this, and the bee obtained the lotus.

XX.

Chakrapáni.

Subject,—the same as the preceding.

प्रेम बेलि पिया लाओल रे ॥
बचन अमी रस सेच कुसुम पहिराओल रे ॥
फुलल कुसुम रस बासल रे ॥
भमर चलल परदेस रहल बिसवासल रे ॥
एक हम दैबक मारल बिह मोहि टारल रे ॥
दोसर पिया परदेस कोर मोर सुन भेल रे ॥
पसरल सरद चान दुति रे ॥
मोर मन भेल चकोर ताहि ओर ससरल रे ॥
चक्रपानि भन सुभ दिन मालति भमर समाज आज भेल रे ॥ २० ॥

Translation 20.

1. My beloved brought the jasmine of love. He watered it with the ambrosia of his voice, and clothed it with flowers.

2. The flowers blossomed, and the nectar exuded therefrom, but the bee, whom I trusted, went away and lived in a far country.

3. In the first place I am smitten by fate, and the Creator hath prevaricated with me. In the second place my beloved is afar off, and my bosom is empty.

4. The splendour of the autumn moon is spread abroad. My mind has become the *chakor*,* and therefore it glided towards him.

5. Chakrapáni saith, now, on an auspicious day, the bee and the jasmine have met.

XXI.

Harkhnáth.

The following song is different from the others. It is by Harkhnáth the principal living poet of Mithilá, a selection from whose poems was published in my Maithil Chrestomathy.

The eleventh of the songs then published was a *Sohar* or congratulatory birth-song describing the birth of Kṛishṇa. I have since ascertained that this was only a portion of the whole, and I now take this opportunity of printing the song as it was originally written by the poet.

अविरल जल धर गरजत घन रस बरिसत रे।
दादुल सङ्घ रभसत दामिनि चमकत रे॥
तड़ित चमकत जलद गरजत करत दादुल सोर ओ।
तिमिर सङ्घ करत आकुल निसिथ भादव घोर ओ॥
अवतरु देवकि नन्दन जन सुख चन्दन रे।
सुर नर मुनि क्रित वन्दन कन्स निकन्दन रे॥
उगल जदु कुल कमल दिन कर सकल जन सुख कन्द ओ।
नन्द नयन चकोर सम्पद पुरन सारद चन्द ओ॥
अमल कमल दल गञ्जन लोचन खञ्जन रे।
त्रिभुवन आपद भञ्जन जग अनुरञ्जन रे॥
जगत रञ्जन विपद भञ्जन वदन गञ्जित चान ओ।
नवल जल धर रुचिर तनु वर विजित मिगमद मान ओ॥
मनि मानिक मुकुता कत कञ्चन अभरन रे।

* A bird supposed to be enamoured of the full moon.

जत कुल नन्द भवन धन पाओल गुनि जन रे ॥
तुरग, गज, रथ, कनक, मानिक, रतन, मुकता माथ ओ ।
पाबि नट भट गनक चटपट भेल सकल सनाथ ओ ॥
सुर गन सहित पुरन्दर करि सुभ डम्बर रे ।
देखल जदु कुल सुन्दर आपुल अम्बर रे ॥
बरिस सुर गन कुसुम परसन मुदित पुलकित अङ्ग रे ।
देब दुन्दुभि बजत अम्बर होत मङ्गल रङ्ग ओ ॥
नारि छिनाओन दगरिनि कत धन पाओल रे ।
हरखित गोप बधू जन सोहर गाओल रे ॥
हरखि गाबहिँ नगर नागरि हरहिँ सुर नर ग्यान ओ ।
सुनत खग मिग रहत निश्चल छुटत मुनि जन ध्यान ओ ॥
हरखनाथ भन मन दय हरि परसन भय रे ।
करथु त्रिपति लछीस्वर धन जन उपचय रे ॥
हरखनाथ सनाथ करि जदु नाथ त्रिभुवन धाम ओ ।
पुरथु मिथिला नगर नायक सफल अभिमत काम ओ ॥ २१ ॥

Translation 21.

1. The clouds thunder without intermission, and pour continuous drops of rain. The throng of frogs is passionate, and the lightning flasheth.*

2. The lightning flasheth, the clouds thunder, and the frogs cry out. The darkness is intense, and the terrible midnight of the month of Bhádo causeth confusion.

3. The son of Devakí became incarnate, as it were (sweet) sandal wood for the people's joy. He is praised by† the gods, saints, and men as the destroyer of Kaṃśa.

4. The sun of the lotus of the house of Yadu rose, a well-spring of happiness to all men. Nanda's‡ eyes were like the *chakor*, and obtained bliss from the full autumn moon (of Kṛishṇa's face).

5. He excelled the spotless lotus-leaf in beauty, and his eyes the *khanjan*. He was the destroyer of all calamities in the universe, and a bringer of happiness upon the earth.

6. The bringer of happiness on the earth, the destroyer of calami-

* It is needless to remind the reader that Kṛishṇa was born in a storm, under cover of which he was conveyed away beyond reach of Kaṃśa.

† Note the force of त्रिन here.

‡ Kṛishṇa's foster-father.

ties, and his countenance excelling the moon in beauty. Shining like a young cloud, his beauteous person (in fragrance) destroyed the pride of musk.

7. And all the wise men in Nanda's house, obtained wealth, in the shape of jewels, pearls, tiaras, and golden ornaments.

8. The dancers, warriors, and astrologers, all at once obtained their desires in the shape of horses, elephants, chariots, gold, rubies, jewels, and pearls upon their heads.

9. Indra with the gods appeared in the atmosphere with glorious pomp, and saw the loveliness of the house of Yadu.

10. The gods, pleased at heart, and their limbs thrilling with joy, rained flowers, and in the sky played propitious melodies upon the drum.

11. Great was the wealth given to the midwife who cut the navel cord: and the wives of the cowherds in their joy sang the *Sohar*.

12. In their joy the fair ones of the city sang, and captivated the minds of gods and men; when birds and beasts heard them they became motionless, and even saints desisted from their contemplation.

13. Harkhnáth saith with all his heart, May Hari be propitious, and bless king Lakshmísvar Singh with increase of wealth and subjects.

14. May Kṛishṇa the refuge of the three worlds, satisfy Harkhnáth's request, and fulfil the heart's desires of the Lord of Mithílá.

The Song of Bijai Mal.—Edited and translated by G. A. Grierson, C. S.

The accompanying poem is an excellent example of the pure Eastern Bhojpúrí dialect spoken in the district of Sháhábád. Its grammar is fully described in Part II of my Grammars of the Bihár dialects published by the Government of Bengal. It is also interesting as showing vividly the manners and customs of a district famous for its fighting men. It is not necessary to allude to them in detail here, as a literal translation is given of the poem, to which reference can be made. The whole structure is founded on the difficulty experienced by a Rajpút father in marrying his daughter, and the large sums he has to pay to the father of a suitable bridegroom.

The poem is sung, and the lines are arranged to suit the air, but are not in metre. It abounds in useful long and redundant forms of substantives.

I am unable to identify the names of persons and places mentioned in it. The poem itself contains all the traditions that are known on the subject. I may note, however, that in the famous *Bundelkhaṇḍ* epic

of Alhá and Rúdal, there are fifty-two *súbás* or generals mentioned, and that the name of one of the principal characters in the present poem is named Báwan Súbá. So also in that poem there is a wonderful horse, and there are other points of resemblance. This must be more than a coincidence, but I am unable to do more than point out the fact.

The author and date of the poem are unknown. It is published just as it was taken down from the mouth of a singer, under the superintendence of Bábú Siv Nandan Lál Ráy, to whom I am indebted for the text, and the proof sheets have again been checked with a fresh recitation by the singer so as to ensure accuracy. Only obvious misspellings have been corrected, and where one word is spelt in two places in two different spellings, an uniform system has been adopted.

गीत बिजै मल।

सुमिरन।

ठैँयाँ सुमिरौँ भुँइयाँ सुमिरौँ तब सुमिरौँ डिहवरवा रे ना ॥
राम तब सुमिरौँ माँता के चरनियाँ रे ना ॥
राम फेनु सुमिरौँ गुरु जी के चरनियाँ रे ना ॥
राम फेनु सुमिरौँ गाँव के बरम्हवाँ रे ना ॥
राम तब सुमिरौँ सुरुज मल रे ना ॥ ५ ॥
राम जे कर जोती जरे सगर दिनवाँ रे ना ॥
राम फेनु सुमिरौँ गङ्गा मैया रे ना ॥
राम जे कर जल बहे निरधरवा रे ना ॥
राम तब सुमिरौँ पाँचो पाँड़वा रे ना ॥
राम तब सुमिरौँ बीर हलुमनवाँ रे ना ॥ १० ॥
राम फेर सुमिरौँ देबिया दुरुगवा रे ना ॥
देवी मोरा कण्ठे रह॰ ना सहैया रे ना ॥
देवी जवन अच्छर भोर परि जैहैँ रे ना ॥
देवी अड्डे अड्डे दीह॰ ना मेराइ रे ना ॥
राम तब सुमिरौँ डिल्ली के गोरैया रे ना ॥ १५ ॥
राम तब सुबहान गीर रे ना ॥
राम केथियैँ मनाबौँ ठैँयाँ भुँइयाँ रे ना ॥
राम केथियैँ मनाबौँ डिहवरवा रे ना ॥

राम कॅथियेँ मनाबोँ माँता चरनियाँ रे ना ॥
राम कॅथियेँ मनाबोँ गुरु चरनियाँ रे ना ॥ २० ॥
राम कॅथियेँ मनाबोँ गाँव के बरम्हवाँ रे ना ॥
राम कॅथियेँ मनाबोँ सुरुज मल रे ना ॥
राम कॅथियेँ मनाबोँ गङ्गा मैया रे ना ॥
राम कॅथियेँ मनाबोँ पाँचो पाँड़वा रे ना ॥
राम कॅथियेँ मनाबोँ बीर हलुमनवाँ रे ना ॥ २५ ॥
राम कॅथियेँ मनाबोँ देबिया दुरुगवा रे ना ॥
राम कॅथियेँ मनाबोँ डिल्ली गोरैया रे ना ॥
राम कॅथियेँ मनाबोँ सुबहान गीर रे ना ॥
राम ऊँमवेँ मनाबोँ ठैयाँ भुँइयाँ रे ना ॥
राम चछतेँ मनाबोँ डिहवरवा रे ना ॥ ३० ॥
राम दसो नोहवेँ मनाबोँ माता जी के चरनियाँ रे ना ॥
राम पिअरी मनाबोँ गुरु के चरनियाँ रे ना ॥
राम आऊतेँ मनाबोँ गाँव के बरम्हवाँ रे ना ॥
राम दुधवा का धरवेँ सुरुज मल रे ना ॥
राम पिठवेँ मनाबोँ गङ्गा मैया रे ना ॥ ३५ ॥
राम सोने के जनेउवेँ पाँचो पाँड़वा रे ना ॥
राम घिऊ का लड़ुएँ बीर हलुमनवाँ रे ना ॥
राम खसियेँ मनाबोँ देबी दुरुगा रे ना ॥
राम पटुकेँ मनाबोँ डिल्लि गोरैया रे ना ॥
राम मुरगेँ मनाबोँ सुबहनवाँ रे ना ॥ ४० ॥
राम तब लेबोँ राम जी के नैँया रे ना ॥
राम इहाँ गावौँ कुँअरा पँवरवा रे ना ॥
राम सभ पछे सुन० मन लाइ रे ना ॥

कुँअरा के पँवारा ॥

रामा बोलि उठे रानी रे मैनवाँ रे ना ॥
रामा सुनि लेबे चल्हकी नौनियाँ रे ना ॥ ४५ ॥
रामा बोलि उठे रानी मैनवाँ रे ना ॥
सामी सुनि लेब० हमरि बचनियाँ रे ना ॥
सामी बेटी भैली बिअहे जोगवा रे ना ॥

सामी देसवा पैसि लड़िका खोजैत॰ रे ना ॥
रामा चलि गैले राजा बावन सुबवा रे ना ॥ ५० ॥
रामा बैठि गैले अपनि कचहरिया रे ना ॥
रामा बोलि उठे बावन गरभी सुबवा रे ना ॥
रामा सुनि लेवे पढ़ल पँडितवा रे ना ॥
पण्डित बेटी भैली बिअहन जोगवा रे ना ॥
पण्डित लेइ ल॰ नौआ छोकड़वा रे ना ॥ ५५ ॥
पण्डित देसवा पैसि लड़िका खोजित॰ रे ना ॥
पण्डित ले ल॰ रुपया पैसवा रे ना ॥
पण्डित देसवा पैसि बर खोजित॰ रे ना ॥
पण्डित घर जोग खोजिह॰ तूँ घरवा रे ना ॥
पण्डित लड़िका जोग खोजिह॰ लड़िकवा रे ना ॥ ६० ॥
पण्डित समधी जोग खोजिह॰ तूँ समधिया रे ना ॥
रामा प्रतना बचन के सुनलवे रे ना ॥
पण्डित लेइले रुपया पैसवा रे ना ॥
पण्डित लेइले नौआ छोकड़वा रे ना ॥
रामा चलि भैले दखिन के देसवा रे ना ॥ ६५ ॥
रामा तिलकी जोग नाहिँ मिलले बरवा रे ना ॥
रामा पूरुब के दिसा खोजि ऐले रे ना ॥
रामा उत्तरहि दिसा खोजि ऐले रे ना ॥
रामा बङ्गत नगर पण्डित धाइ ऐले रे ना ॥
रामा नाहिँ मिलले तिलकी जोगी बरवा रे ना ॥ ७० ॥
रामा तब चलि गैले बावन कचहरिया रे ना ॥
रामा नइ नइ करे नौआ सलमियाँ रे ना ॥
रामा देत बाड़े उहाँ असिरबदवा रे ना ॥
रामा बोलि उठे गरभी बावन सुबवा रे ना ॥
पण्डित कह॰ ना लड़िका के हलवा रे ना ॥ ७५ ॥
राजा बङ्गत नगर फिरि ऐले रे ना ॥
रामा राउर बेटी जामे दुसमनवाँ रे ना ॥
रामा ओकरा जोगी कतऊँ ना मिले लड़िकवा रे ना ॥
रामा प्रतना बचन के सुनलवे रे ना ॥
रामा बोलि उठे बावन गरभी सुबवा रे ना ॥ ८० ॥

पण्डित चलि जाऊ पच्छिम के देसवा रे ना ॥
पण्डित चलि जाऊ घुनघुन सहरवा रे ना ॥
पण्डित उहाँ बाड़े एक राजा सुबवा रे ना ॥
पण्डित उँहा बाड़े तिलकी जोग लड़िकवा रे ना ॥
पण्डित एतना बचन के सुनलवे रे ना ॥ ९५ ॥
पण्डित चलि गैले घुनघुन सहरवा रे ना ॥
पण्डित चलि गैले राजा दरबरवा रे ना ॥
रामा बोलि उठे बिपर पँडितवा रे ना ॥
राजा सुनि लेब॰ हमरि बचनियाँ रे ना ॥
राजा रवाँ बाड़े दू लड़िकवा रे ना ॥ ९० ॥
राजा हम देखब राउर सौदवा रे ना ॥
रामा एतना बचन के सुनलवे रे ना ॥
रामा बोलि उठे राजा गोरख सिँघवा रे ना ॥
रामा सुनि लेबे बेटा रन धिरवा रे ना ॥
रामा हुकुम दे द॰ हँमियाँ लौँड़िया रे ना ॥ ९५ ॥
रामा कुँअरा के लै आवसु रे ना ॥
रामा एतना बचन के सुनलवे रे ना ॥
रामा बोलि उठे बेटा धीर छतिरी रे ना ॥
रामा सुनि लेबे हँमियाँ लौँड़िया रे ना ॥
रामा कुअरा के अब लै आवऊ रे ना ॥ १०० ॥
रामा लेइ ऐली हँमियाँ लौँड़िया रे ना ॥
रामा देखत भैले पढ़ल पँडितवा रे ना ॥
रामा होइ गैले मनमनवाँ रे ना ॥
राजा केतना तिलक कुँअरा के लेब॰ रे ना ॥
रामा बोलि उठे राजा गोरख सिँघवा रे ना ॥ १०५ ॥
रामा सुनि लेब॰ पढ़ल पँडितवा रे ना ॥
पण्डित नौ लाख लेबौं तिलकवा रे ना ॥
पण्डित छौ लाख लेबौं दहेजवा रे ना ॥
पण्डित चारि लाख लेबौं दुआर पुजवा रे ना ॥
रामा तीनि लाख लेबौं जनेउआ रे ना ॥ ११० ॥
रामा दुइ लाख लेबौं कुअरा कन्हवरिया रे ना ॥
पण्डित तब करबौं कुँअरा बिअहवा रे ना ॥

रामा प्रतना बचन के सुनलवे रे ना ॥
पण्डित चलि गैले गढ़ परबतवा रे ना ॥
रामा चलि गैले राजा कचहरिया रे ना ॥ ११५ ॥
रामा बोलि उठे पढ़ल पँडितवा रे ना ॥
राजा सुनि लेब॰ हमरि बचनियाँ रे ना ॥
राजा समधी जोग बाड़े समधिया रे ना ॥
राजा लड़िका जोग बाड़े लड़िकवा रे ना ॥
राजा घर जोग बाड़े घरवा रे ना ॥ १२० ॥
राजा बज़त माँगे रुपैवा रे ना ॥
राजा नौ लाख माँगे तिलकवा रे ना ॥
राजा क्रौ लाख माँगेला दहेजवा रे ना ॥
राजा चारि लाख माँगे दुआर पुजवा रे ना ॥
राजा तीनि लाख माँगे जनेउआ रे ना ॥ १२५ ॥
राजा दुइ लाख माँगे कन्हवरिया रे ना ॥
रामा प्रतना बचन के सुनलवे रे ना ॥
राजा इहो तो कबूल करि ऐलौं रे ना ॥
राजा आठ दिनवाँ के धैलौं दिनवाँ रे ना ॥
रामा बोलि उठे राजा गरभी बावन सुबवा रे ना ॥ १३० ॥
रामा सुनि लेब॰ बेटा मानिक चँदवा रे ना ॥
बबुआ जलदी से खोल॰ भँडरवा रे ना ॥
बबुआ दस पाँच भैया नेवँतिह॰ रे ना ॥
बबुआ गड़िअन लाद॰ रसतिया रे ना ॥
बबुआ भिड़ि ल॰ भँवरानन हथवा रे ना ॥ १३५ ॥
बबुआ चढ़ि जाह देस घुनघुनवा रे ना ॥
बबुआ कुँअरा के तिलक चढ़ैह॰ रे ना ॥
रामा प्रतना बचन के सुनलवे रे ना ॥
रामा चलि भैले राजा मानिक चँदवा रे ने ॥
रामा चलल चलल चलि गैले रे ना ॥ १४० ॥
रामा चलि गैले देस घुनघुनवा रे ना ॥
रामा चलि गैले राजा दरवजवा रे ना ॥
रामा तब बोले राजा गोरख सिँघवा रे ना ॥
बबुआ सुनि लेब॰ बेटा धीर छतिरी रे ना ॥

बबुआ आइ गैले कुँअरा तिलकवा रे ना ॥ १४५ ॥
बबुआ जलदी से करना तेअरिया रे ना ॥
बबुआ जलदी से दह सरबतवा रे ना ॥
बबुआ पूड़ि घालऽ अब ना सैतिया रे ना ॥
रामा पढ़ल पँडितवा बोलौले रे ना ॥
पण्डित सुनि लेबऽ हमरि बचनियाँ रे ना ॥ १५० ॥
पण्डित जलदी से देखऽ ना सैतिया रे ना ॥
रामा बोलि उठे पढ़ल पँडितवा रे ना ॥
राजा भलि भाँति बाड़ि सैतिया रे ना ॥
राजा जलदी से तिलक चढ़ावऽ रे ना ॥
रामा बोलि उठे अब धीर छतिरी रे ना ॥ १५५ ॥
रामा सुनि लेबऽ राजा मानिक चँदवा रे ना ॥
राजा चलि चलऽ अब अँगनवाँ रे ना ॥
राजा जलदी तिलक चढ़ावऽ रे ना ॥
रामा बैठि गैले कुँअर बिजैया रे ना ॥
रामा बैठि गैले दस ना भैयवा रे ना ॥ १६० ॥
रामा बैठि गैले राजा मानिक चनवाँ रे ना ॥
रामा उठे लागे अब ना मङ्गलवा रे ना ॥
रामा चढ़े लागे अब तऽ तिलकवा रे ना ॥
रामा तिलक चढ़ि गैले रे ना ॥
रामा सभे चलि ऐले अब तऽ दोअरवा रे ना ॥ १६५ ॥
रामा भलि भाँति बीजे करौले रे ना ॥
रामा सभे पछे खाइ पी तेअरवा रे ना ॥
रामा भलि भाँति भैलि तेअरिया रे ना ॥
रामा आठ दिन के दिहले दिनवाँ रे ना ॥
रामा मानिक चन्द फिरि ऐले घरवा रे ना ॥ १७० ॥
रामा बोलि उठे राजा गोरख सिँघवा रे ना ॥
रामा सुनि लेबऽ बेटा धिरवा छतिरी रे ना ॥
बबुआ देस देस दऽ ना नेवँतवा रे ना ॥
बबुआ भलि भाँति साजऽ बरिअतिया रे ना ॥
रामा फ्रतना बचन के सुनलवे रे ना ॥ १७५ ॥
रामा बऊत भाइ नेवँतले रे ना ॥

रामा भलि भाँति सजली बरिअतिया रे ना ॥
रामा चलि भेले राजा गोरख सिँघवा रे ना ॥
रामा सूवा साजि चलले बरिअतिया रे ना ॥
रामा चलि ऐले देस गढ़ परबतवा रे ना ॥ १८० ॥
रामा खबरि दिहले गोरख सिँघवा रे ना ॥
रामा सुनि लेब॰ अब तुँऊँ पहरू रे ना ॥
रामा चलि जाऊ राजा कचहरिया रे ना ॥
बबुआ खबरि अब देइ दीह॰ रे ना ॥
रामा आइ गैलि सूवा बरिअतिया रे ना ॥ १८५ ॥
रामा राजा किहाँ खबरि पऊँचलि रे ना ॥
रामा तब बोले राजा बावन सुबवा रे ना ॥
राम सुनि लेब॰ बेटा मानिक चँदवा रे ना ॥
बबुआ भलि भाँति लेइ आव॰ बरिअतिया रे ना ॥
बबुआ लेइ आवऊ जिरऊल किलवा रे ना ॥ १९० ॥
रामा प्रतना बचन के सुनलवे रे ना ॥
रामा मानिक चन्द भलि भाँति लेइ ऐले बरिअतिया रे ना ॥
रामा सभ बरियाती किला मे ढुकौले रे ना ॥
रामा सभ बरियात बन्द कैले रे ना ॥
राम भलि भाँति बाड़ि सैतिया रे ना ॥ १९५ ॥
राम कुँअरा घोड़ा बाँधे निमियाँ के गछवा रे ना ॥
राम दस पाँच लेले ना भैयवा रे ना ॥
राम भलि भाँति हेाला बिअहवा रे ना ॥
राम जेतना रहलि राजा बरिअतिया रे ना ॥
राम सभे बरियाती बाँधि रखले रे ना ॥ २०० ॥
राम बोलि उठे राजा बावन सुबवा रे ना ॥
राम सुनि लेब॰ बेटा मानिक चँदवा रे ना
बबुआ गोड़वन दियाव॰ अब बेरिया रे ना
बबुआ डँड़वन मैं भर॰ ना जँजिरवा रे ना
बबुआ नोहवन मैं ठोक॰ खपचरिया रे ना ॥ २०५ ॥
राम सभ गति सभ कर मानिक चन्द कैले रे ना
राम कुँअर गैले अब कोहबरवा रे ना
राम उहाँ रहली देबि त॰ दुरुगवा रे ना

राम घोड़ा मन करेला बिचरवा रे ना
राम सुनि लेऊ देबि दुरुगवा रे ना ॥ २१० ॥
राम कुँअरा का नान्ह के हऊ पुजमनवाँ रे ना
राम जेतना रहलि कुँअरा बरिअतिया रे ना
राम सभ बरियात बावन डाले जेलखनवाँ रे ना
राम घोड़ा दँतें काटेला पिछड़िया रे ना
राम सभ पिछाड़ी काटि घलले रे ना ॥ २१५ ॥
राम अब चलि गैले मड़ौआ रे ना
राम कुँअर रहे अब कोहबरवा रे ना
राम उहाँ घोड़ा देला ना मटकिया रे ना
राम सुनि लेबे कुँअर बिजैया रे ना
बबुआ जेतनहिं रहलि बरिअतिया रे ना ॥ २२० ॥
बबुआ बावन सूबा ढ़कौले जिरऊलिया रे ना
बबुआ बाँचि गैल० कुलवा में एकला फतिँगवा रे ना
बबुआ तुँऊँ तो भैल० बुरबकवा रे ना
बबुआ फानि घोड़ा हेाख० असवरवा रे ना
रामा फानि कुँअर भैले असवरवा रे ना ॥ २२५ ॥
रामा हिच्छल छाड़ि देले धरम धरतिया रे ना
रामा जमीन सरगवा के बिचवा रे ना
रामा घोड़ा बिचे बिचे मारेला मेँड़रिया रे ना
रामा घोड़ा चलि ऐले दसो ना मुलुकवा रे ना
रामा चलि ऐले गाँव घुनघुनवा रे ना ॥ २३० ॥
रामा कुँअर हेाइ गैले अब त० बिअहवा रे ना
रामा बैठल रहे भौजी सोनमतिया रे ना
रामा नजरि परेला सोनमतिया रे ना
रामा खिसिअन भैली मतवलवा रे ना
रामा बोलि उठे भौजी सोनमतिया रे ना ॥ २३५ ॥
रामा सुनि लेब० हिच्छल बकेड़वा रे ना
रामा का भैले सभ बरिअतिया रे ना
रामा सुनि लेबे सोनमती भौजी रे ना
रामा सभ बरिअतिया डाले जेलखनवाँ रे ना
रामा बोलि उठे रानी सोनमतिया रे ना ॥ २४० ॥
रामा हिच्छल कहवाँ के मरी टँगले ऐल० हेा ना

रामा कुँअरा ले बनली धिरिजवा रे ना
रामा कुलवा में एकल पतिंगवा रे ना

रामा प्रतना बचन के सुनलवे रे ना
रामा कुँअरा भैल बारह बरिसवा रे ना ॥ २४५ ॥
रामा चलि गैले बाबा बगैचवा रे ना
रामा जहाँ खेले लैका गदेलवा रे ना
रामा सभ लैका खेले गुलि टँड़वा रे ना
रामा बोलि उठे कुँअर बिजैया रे ना
रामा लड़िके सुनि लेब॰ हमरि बचनियाँ रे ना ॥ २५० ॥
रामा लैके हमहूँ खेलब गुलि टँड़वा रे ना
रामा बोलि उठे लैका गदेलवा रे ना
बबुआ सुनि लेब॰ कुँअर बिजैया रे ना
बबुआ तुँऊँ हव॰ गाँव के ठकुरवा रे ना
रामा बोलि उठे कुँअर बिजैया रे ना ॥ २५५ ॥
रामा लैके खेलिया में कवन ठकुरैया रे ना
रामा जैसे खेले बनियाँ कोकड़वा रे ना
रामा हम ओइसे खेलब गुलि टँड़वा रे ना
रामा सुनि लेब॰ कुँअर बिजैया रे ना
रामा खेलिया में होइहें गालि गेंगवा रे ना ॥ २६० ॥
रामा सुनि पैहें भौजो सोनमतिया रे ना
रामा भुसवें भरैहें हमनी खलवा रे ना
रामा बोलि उठे कुँअर बिजैया रे ना
लड़िके एकर जनि कर॰ ना अँदेसवा रे ना
लड़िका एकर करबों हम जवबिया रे ना ॥ २६५ ॥
कुँअर सुनि लेब॰ हमरि बचनियाँ रे ना
बबुआ लेइ आव॰ अपनि तुँ गुलिया रे ना
बबुआ तबे हम खेलिया खेलबों रे ना
रामा चलि भैले कुँअर बिजैया रे ना
रामा कुँअर चलि गैले लाख दरवजवा रे ना ॥ २७० ॥
रामा सुनि लेबे भौजी सोनमतिया रे ना
भौजी हमरा लागे गुलि डण्टा सधवा रे ना

रामा सुनि लेब॰ कुँअर बिजैया रे ना
बबुआ गुल्लि के कवन हवौ खेलिया रे ना
बबुआ तुँऊँ खेल॰ जूआ चौपरिया रे ना ॥ २७५ ॥
राम प्रतना बचन कुँअरा सुनले रे ना
राम कुँअरा गैले लाल दरवजवा रे ना
कुँअरा गोड़ मूँड़ तानेला चदरिया रे ना
राम अन जल बोलेला हरमवाँ रे ना
भौजी जब ले नाहिं गुलिया तेअरवा रे ना ॥ २८० ॥
राम प्रतना बचन के सुनलवे रे ना
राम सुनि लेबे हेमियाँ लौंड़िया रे ना
राम चलि जाहु कुसहर दुकनियाँ रे ना
राम जलदी से कुसहर बोलैबे रे ना
राम चलि भैली हेमियाँ लौंड़िया रे ना ॥ २८५ ॥
राम चलि गैली लोहरा दुकनिया रे ना
राम सुनि लेब॰ कुसहर लोहरा रे ना
राम तुँहँ बोलावे रानी सोनवाँ रे ना
राम प्रतना बचन के सुनलवे रे ना
राम कुसहर चलि गैले रङ्ग ना महलिया रे ना ॥ २९० ॥
राम सनमुख परलि नजरिया रे ना
भौजी कवन भैले अब ना कुसरवा रे ना
भौजी कबही ना परले हँकरवा रे ना
राम आजु काहे भैले आजु हँकरवा रे ना
भौजी जलदी से दीहीं ना ऊकुमवाँ रे ना ॥ २९५ ॥
बबुआ सुनि लेबे कुसहर लोहरा रे ना
बबुआ कुँअर हवे प्रान के अधरवा रे ना
बबुआ कुँअर ले के बँधलौं सबुरवा रे ना
राम कुलवा में प्रकला फतिंगवा रे ना
राम सेङ्ग छाड़े अब अन जलवा रे ना ॥ ३०० ॥
बबुआ जलदी से कर॰ गुल्लि तेअरिया रे ना
राम चलि भैले कुसहर लोहरा रे ना
राम जहाँ बाड़े कुँअर बिजैया रे ना
राम नइ नइ करेला सलमिया रे ना
बबुआ कैसन चाहीं राउर गुलिया रे ना ॥ ३०५ ॥

दैबा अस्सी मन के लेबौं गुलिया रे ना
दैबा और चौरासी मन डँटवा रे ना
राम आठ दिन मैं करः ना तेअरिया रे ना
राम प्रतना बचन के सुनलवे रे ना
राम चलि ऐले कुसहर लोहरवा रे ना ॥ ३१० ॥
राम नेवँते लागे हित ना कुटुमवाँ रे ना
राम कुसहर नेवँतत बाड़े दर ना देअदवा रे ना
राम लागल गुलिया गढ़ैया रे ना
राम सभ मिलि गढ़े गुलि डँटवा रे ना
राम नाहिं गुल्लि भैलि तेअरवा रे ना ॥ ३१५ ॥
राम भागि गैले दर ना देअदवा रे ना
राम भागि चले कुसहर लोहरा रे ना
राम नाहिं भैले गुलिया तेअरवा रे ना
राम कुसहर घर छोड़ी चलले रे ना
राम बिचवाँ मिलेला बिकरमजितवा रे ना ॥ ३२०
राम सुनि लेबः कुसहर लोहरा रे ना
बबुआ कवन गाढ़ परि गैले रे ना
बबुआ इहवाँ से भागि तुँऊँ चललः रे ना
बबुआ गाँवे के ठाकुर हवे कुँअर रे ना
बबुआ सेइ माँगे गुलिया तेअरिया रे ना ॥ ३२५ ॥
राम अस्सी मन के गुल्लि चौरासी मन के डँटवा रे ना
राम आठ दिन मैं माँगले तेअरिया रे ना
राम नाहिं भैलि गुलिया तेअरिया रे ना
राम सुनि पैहैं कुँअर बिजैया रे ना
राम प्रहि लागि भुसवँ भरैहैं मोरि खलिया रे ना ॥ ३३० ॥
राम प्रहि लागि अब भागि चललौं रे ना
राम बोलि उठे अब बिकरमजितवा रे ना
बबुआ चलि चलः अब तूँ अपनि दुकनियाँ रे ना
बबुआ जलदी से भठिया धनकैहः रे ना
राम चलि ऐले आगा बिकरमजितवा रे ना ॥ ३३५ ॥
राम कुसहर घरे फिरि ऐले रे ना
राम बिकरमजितवा छूअले गुलि डँटवा रे ना
राम गुलि डण्टा होइ गैले तेअरवा रे ना

राम चलि भैले कुसहर लोहरा रे ना
राम जहाँ बाड़े कुँअरा बिजैया रे ना ॥ ३४० ॥
राम सुनि लेब॰ कुँअरा बिजैया रे ना
बबुआ गुलिया तेआर होइ गैलि रे ना
राम प्रतना बचन के सुनलवे रे ना
राम कुँअर चलि भैले कुसहर दुकनियाँ रे ना
राम देखत भैले गुलिया जे डँटवा रे ना ॥ ३४५ ॥
राम फिरि गैले लाल दरवजवा रे ना
राम चलि गैले देबिया चरवा रे ना
राम सुनि लेबे देबिया दुरगवा रे ना
मैया नान्हे के हऊ पुजमनवाँ रे ना
मैया लोहरा भरोसे जाल ओढ़लोँ रे ना ॥ ३५० ॥
मैया हम चललोँ गुलिया खेलनवा रे ना
मैया मोरि बाँहिं देऊ बौसैया रे ना
राम चलि भैले कुँअर बिजैया रे ना
राम जहाँ खेले लरिका गदेलवा रे ना
राम कुँअर अन्ह करे गुलि डँटवा रे ना ॥ ३५५ ॥
राम कुँअर देखि सभ लरिका भैले सनमतवा रे ना
कुँअर मोरि पहिले खेलिया खेलावछ रे ना
राम प्रतना बचन के सुनलवे रे ना
राम फानि कुँअर गैले मैदनवाँ रे ना
राम खेले लगले लरिका गदेलवा रे ना ॥ ३६० ॥
राम सभ कर गुल्लि कुँअर लोकले रे ना
रामा कुँअरा के खेलिया लवटली रे ना
रामा सभ लरिके गैले मैदनवाँ रे ना
रामा सुमिरेले देबिया दुरगवा रे ना
दुरगा मोर उपर होख॰ ना सहैया रे ना ॥ ३६५ ॥
राम कुँअरा मारे अब गुलि डँटवा रे ना
राम जेतना लरिका परले अब सोझवा रे ना
राम ठहरे सरद होइ गैले रे ना
राम गुलिया गिरेले अखी कोसवा रे ना
राम सभ लरिके भैले सनमतवा रे ना ॥ ३७० ॥
राम भागि चलले लरिका गदेलवा रे ना

राम बोलि उठे कुँअरा बिजैया रे ना
राम सुनि लेबे सारे ना लरिकवा रे ना
राम तोहनी के खेलिया खेलौलीं रे ना
राम हमरे त० खेलिया खेलाव० रे ना ॥ ३७५ ॥
राम फ्रतना बचन के सुनलवे रे ना
राम बोलि उठे फ्रक त० लरिकवा रे ना
राम सुनि लेब० कुँअर बिजैया रे ना
राम जेकरा बँहियाँ फ्रतना बौसैया रे ना
राम सेकर बाप सहे जेलखनवाँ रे ना ॥ ३८० ॥
राम सेकर भैया सहे जेलखनवाँ रे ना
राम बनियाँ घरे लिहित० जनमियाँ रे ना
राम डँड़िया तौलि अब खैत० रे ना
राम छतिरी के कोखिया जनमल० रे ना
राम बारह बरिस के तोहर उमिरिया रे ना ॥ ३८५ ॥
राम तोहर जीअल धिरकरवा रे ना
राम तोहरे बिअहवा बँधैले रे ना
राम फ्रतना बचन कुँअर सुनले रे ना
राम डँटवा फेँकेला जमुना परवा रे ना
राम कुँअर घरे चलि ऐले रे ना ॥ ३९० ॥
राम गोड़े मूँड़ तानेला चदरिया रे ना
राम बोलि उठे भौजी सोनमतिया रे ना
राम सुनि लेबे हेमियाँ लौंड़िया रे ना
हेमियाँ बबुआ गैले गुलिया खेलनवाँ रे ना
राम घड़ी दिन चढ़ले पहरवा रे ना ॥ ३९५ ॥
हमियाँ बबुआ के मारैले खरैया रे ना
राम फ्रतना बचन के सुनलवे रे ना
हेमियाँ गैजी जहाँ कुँअर गोड़े मूँड़ ताने चदरिया रे ना
राम बोलि उठी हेमियाँ लौंड़िया रे ना
बबुआ तुँऊँ कर० राम दतुअनियाँ रे ना ॥ ४०० ॥
बबुआ गँगवा कर० असननवाँ रे ना
बबुआ तब कर० देविया पुजनवाँ रे ना
बबुआ तब कर० अब दाना दुनियाँ रे ना

राम बोलि उठे कुँअरा बिजैया रे ना
हेमियाँ तबे तः करब दतुअनियाँ रे ना ॥ ४०५ ॥
हेमियाँ हमे जबे बाप के नैयाँ बतैबे रे ना
हेमियाँ भैया के नैयाँ बतैबे रे ना
राम बोलि उठे हेमियाँ लौंड़िया रे ना
कुँअर इहे हाल जाने राउर भौजैया रे ना
राम चलि भैली हेमियाँ लौंड़िया रे ना ॥ ४१० ॥
राम जहाँ बाटे भौजी सोनमतिया रे ना
मार सनमुख पड़लि नजरिया रे ना
राम बोलि उठी भौजी सोनमतिया रे ना
हेमियाँ बबुआ के कहः कुसलैय रे ना
राम बोलि उठी हेमियाँ लौंड़िया रे ना ॥ ४१५ ॥
भौजो का ई कहौं कुँअर कुसलैया रे ना
भौजो कुँअर बोले बोलिया कुबोलिया रे ना
भौजो बाप कर नाम कुँअर पूछेला रे ना
भौजो भैया के नाम कुँअर पूछेला रे ना
रामा चलि भैली सोनमतिया रे ना ॥ ४२० ॥
रामा ले लिहली लोटा भरि पनियाँ रे ना
रामा ले लिहली राम दतुअनियाँ रे ना
रामा ले लिहली गैया के दुधवा रे ना
रामा ले लिहली मगही छोली पनवाँ रे ना
भौजी चलि भैली लाल दरवजवा रे ना ॥ ४२५ ॥
रामा जहाँ सूते कुँअरा बिजैया रे ना
रामा जाइ कुँअरा सिरवाँ ठाढ़ भैली रे ना
बबुआ उठः कुँअर करः दतुअनियाँ रे ना
बबुआ गङ्गा करः असननवाँ रे ना
बबुआ पीअ नः सोराही गाइ के दुधवा रे ना ॥ ४३० ॥
बबुआ कचरः ना मगही छोली पनवाँ रे ना
बबुआ छाड़ि दः मन के किरोधवा रे ना
बबुआ तुँऊँ हवः परान के अधरवा रे ना
बबुआ तुँहँ ले बीतल सगर दिनवाँ रे ना
बबुआ तुँहँ ले बाँधलौं सबुरवा रे ना ॥ ४३५ ॥

रामा बोलि उठे कुँअर बिजैया रे ना
भौजो तबे खैबौं अनवाँ से पनियाँ रे ना
भौजो जबे बाप के नैयाँ बतैबू रे ना
भौजो का भैले अब मोर भैया रे ना
बबुआ जब रहल अँम्मा के ओतनवाँ रे ना ॥ ४४० ॥
बबुआ जबे मरि गैले राउर बपो रे ना
बबुआ जाहि दिन तोहरे जनमवाँ रे ना
बबुआ ओहि दिन हमरो गवनवा रे ना
बबुआ ताहि दिन तोहार भैया मुअले रे ना
बबुआ प्रतना बचन जब सुनले रे ना ॥ ४४५ ॥
भौजो नाहिं रहितू तुँऊँ भौजैया रे ना
भौजो मारि दिहतीं तोहरो सिरवा रे ना
भौजो हमरे बियाहे बाप गैले रे ना
भौजो सेहो सहे अब जेहलखनवाँ रे ना
भौजो हमरे बियाहे भैया गैले रे ना ॥ ४५० ॥
भौजो सेहो सहे अब जेहलखनवाँ रे ना
भौजो ससुर के नाम बावन सुबवा रे ना
भौजो सेहि सूबा डाले जेहलखनवाँ रे ना
रामा प्रतना बचन सोनवाँ सुनली रे ना
रामा रोवे लगली जार बे जरवा रे ना ॥ ४५५ ॥
राम चलि भैली रङ्ग महलवा रे ना
राम जहाँ बाड़ी सखिया सलेहरी रे ना
राम सुनि लेबू सखिया सलेहरी रे ना
सखिया कुँअरा गैले गुलिया खेलनवाँ रे ना
सखिया कवने बिरिनी जगौले रे ना ॥ ४६० ॥
सखिया कुँअरा मन पारे बाप भैयवा रे ना
रामा कुँअरा चलल दुसमन देसवा रे ना
सखिया एकर ना करऽ ना उपेया रे ना
सखिया कैसे मैं कुँअरा भोरैबूँ रे ना
रामा बोलि उठे सखिया सलेहरी रे ना ॥ ४६५ ॥
सखि गोड़वा मैं डालऽ गोड़हरवा रे ना
सखि बारे बारे मोतिया गुहावऽ रे ना

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सखि करि लꣳ सोलऊ सिंगरवा रे ना
भौजो रचि रचि सेजिया डसैहꣳ रे ना
भौजो जाइ कुँअरा बहियाँ पकड़िहꣳ रे ना ॥ ४७० ॥
रामा करि लिहली सभ सिंगरवा रे ना
भौजो चलि गैली लाल दरवजवा रे ना
रामा जहाँ सूते कुँअर बिजैया रे ना
रामा जाइ कुँअरा बहियाँ पकड़ली रे ना
बबुआ तुँऊँ चलꣳ रङ्ग ना महलवा रे ना ॥ ४७५ ॥
बबुआ बिधि के लिखल ना निमेटवा रे ना
बबुआ तोरा मोरा लिखे सुख निँदिया रे ना
रामा चलि भैले कुँअरा बिजैया रे ना
रामा सूइ रहे सोनमतिया रे ना
रामा बिचे धरेला कुँअर तेगवा रे ना ॥ ४८० ॥
दैवा बोलि उठे भौजी सोनमतिया रे ना
बबुआ लोहिया लगले पह फटले रे ना
बबुआ फिरि के ना ताकꣳ चेहरवा रे ना
दैवा प्रतना बचन कुँअर सुनले रे ना
दैवा उतरि कुँअर ठाढ़ भैले रे ना ॥ ४८५ ॥
भौजो अब ले रहलू भौजैया रे ना
भौजो अजुए से भैलू महतरिया रे ना
रामा आँगा आँगा चले सोनमतिया रे ना
रामा तेकरा पीछे कुँअर बिजैया रे ना
रामा बोलि उठे कुँअरा बिजैया रे ना ॥ ४९० ॥
भौजो कहाँ बाड़े हिच्छल बछेड़वा रे ना
रामा जहाँ रहे हिच्छल बछेड़वा रे ना
रामा बोलि उठे भौजी सोनमतिया रे ना
रामा घोड़वा रहले अब तꣳ ओबरा रे ना
भौजी उपरा चकवा दियौली रे ना ॥ ४९५ ॥
कुँअरा उहाँ सुमिरे देबिया दुरगवा रे ना
दुरगा मोरि बहियाँ होखꣳ ना सहैया रे ना
रामा जाइ कुँअर चकवा उलटले रे ना
दबा घोड़वा पर परलि नजरिया रे ना

रामा रोवे लगले हिच्छल बछेड़वा रे ना ॥ ५०० ॥
देवा बोलि उठे हिछला बछेड़वा रे ना
रामा खिसिये भरल मतवलवा रे ना
कुँअर काहे के मुँहवाँ देखौले रे ना
राम बारह बरिस बीति गैले रे ना
राम हमरो के डललन ओबरवा रे ना ॥ ५०५ ॥
राम बोलि उठे हिच्छल बछेड़वा रे ना
कुँअर इहे हाल कैले अपना गढ़वा रे ना
राम बोलि उठे कुँअरा बिजैया रे ना
हिच्छल नाहिं जनलों राउर हवलिया रे ना
हिच्छल आजु जनलों राउर हवलिया रे ना ॥ ५१० ॥
हिच्छल चलि ऐलों रौरा में खोजिया रे ना
रामा उहाँ कुँअर ओबरा से निकासले रे ना
राम लेइ गैले बाबा का सगरवा रे ना
रामा उहाँ घोड़ा मलि दलि कैले तेअरवा रे ना
राम लेइ ऐले अपना दुअरवा रे ना ॥ ५१५ ॥
राम बाँधि देले निमियाँ के गछवा रे ना
राम उहाँ कुँअर दे घोड़ा घिऊ मलिदवा रे ना
राम तब घोड़ा दनवाँ बढ़ौले रे ना
राम तब घोड़ा भैले तेअरवा रे ना
राम कुँअर चलि गैले रङ्ग ना महलवा रे ना ॥ ५२० ॥
राम जहाँ बाड़ी भौजी सोनमतिया रे ना
भौजो देइ देबू घोड़ा चरजमवाँ रे ना
राम देइ देली घोड़ा चरजमवाँ रे ना
कुँअर लेइ ऐले घोड़ा का पसवा रे ना
राम घोड़ा पर कैले कसरिया रे ना ॥ ५२५ ॥
राम फानि कुँअर भैले असवरवा रे ना
राम बोलि उठी भौजी सोनमतिया रे ना
बबुआ तुँऊँ चललन दुसमन देसवा रे ना
बबुआ चलि जाहन देबिया चौरवा रे ना
राम देबिया के गोड़ लागि धलिहन रे ना ॥ ५३० ॥
कुँअर चलि गैले देबिया चौरवा रे ना

राम जाइ कुँअरा अरज लगौले रे ना
देवी हम चललों दुसमन देसवाँ हो ना
देवी मोरा उपर रहिह॰ सहैया हो ना
रामा बोलि उठी भौजी सोनमतिया रे ना ॥ ५३५ ॥
बबुआ देवी दुरगा हिर्दया मैं रखिह॰ हो ना
राम बोलि उठी भौजी सोनमतिया रे ना
बबुआ तुँऊँ चलल॰ दुसमन देसवा रे ना
बबुआ कैसे जनबों तोहरि हवलिया हो ना
देवा बोलि उठे कुँअरा बिजैया हो ना ॥ ५४० ॥
भौजो हरिअर चनन कटैह॰ हो ना
भौजो अँगना मैं दीह॰ रोपवाइ हो ना
भौजो जब लौं चनन कचनरवा हो ना
भौजो जब लौं जनिह॰ कुँअरा जिअत बाटे हो ना
भौजो जब चनन जैहैं मौराइ हो ना ॥ ५४५॥
तब जनिह॰ कुँअर जुझि गैले हो ना
राम बोलि उठी भौजी सोनमतिया रे ना
राम रोवे लागल रानी सोनमतिया रे ना
बबुआ अजुए से मोरा के बिसरल॰ हो ना
राम चलि भैले कुँअरा बिजैया हो ना ॥ ५५० ॥
राम हिच्छल उड़ि लगले अकसवा हो ना
राम चलल चलल चलि गैले हो ना
राम चलि गैले गढ़ परबतवा हो ना
राम डेरा डाले बावन पोखरवा हो ना
राम बोलि उठे देबिया दुरगवा हो ना ॥ ५५५ ॥
बबुआ तुऊँ रेल॰ दुसमन देसवा हो ना
बबुआ इहाँ रखिह॰ बऊत चतुरैया हो ना
बबुआ हम जात बाड़ी बावन गढ़वा हो ना
बबुआ चल्हकी मैं सपना देखेबों हो ना
राम चलि गैली देवी बावन गढ़वा हो ना ॥ ५६० ॥
राम जहाँ सूते चल्हकी नौनिया हो ना
राम तहाँ देवी धैले बाड़े बिलाइ सरुपवा हो ना
राम सुनि लेबे चल्हकी नौनिया रे ना

चल्हकी तिलकी के बाप खोनावे पोखरवा हो ना
भैया उनकर बँधावे घटिया हो ना ॥ ५६५ ॥
राम पोखरा के बड़ि करिगरिया हो ना
चल्हकी कबहीं ना तिलकी देखली पोखरवा हो ना
चल्हकी उनकर जीअल धिरकरवा हो ना
देबो सपना देखाइ चलि ऐलो हो ना
राम जहाँ बाड़े कुँअरा बिजैया हो ना ॥ ५७० ॥
पच्छे चल्हकी के हाल अब सुनि लेब॰ हो ना
राम चलि भैली चल्हकी नौनिया हो ना
राम जहाँ बाड़ी तिलकी रनियाँ हो ना
राम बोलि उठे चल्हकी नौनिया हो ना
राम सुनि लेबे तिलकी रनियाँ हो ना ॥ ५७५ ॥
रानी सूतल मैं रहलों चित सरिया हो ना
रानी राति के सपनवाँ अजगुतवा हो ना
रानी बाप राउर खनावेले पोखरवा हो ना
रामा भैया बँधावेले चारु घटिया हो ना
रानी कबहीं ना देखलू पोखरवा हो ना ॥ ५८० ॥
रानी चलि चल॰ पोखरा असननवाँ हो ना
राम ए्तना बचन तिलकी सुनली हो ना
राम चलि भैली माँता का पसवा हो ना
राम सनमुख परलि नजरिया हो ना
बेटी केकरा से कैलू गारि गेंगवा हो ना ॥ ५८५ ॥
बेटी आजो ऐलू हमरा पसवा हो ना
माँता नाहिं केहू से गारि गेंगा कैली हो ना
माँता बाप मोर खनावे पोखरवा हो ना
माँता पोखरा के बड़ि करिगरिया हो ना
माँता हम जैबों पोखरा असननवाँ हो ना ॥ ५९० ॥
माँता हमरा के दे दहु कुटिया हो ना
माँता एहि कारन हम ऐलों हो ना
राम बोलि उठे रानी मैना हो ना
बेटी सुनि लेबू हमरि बचनियाँ हो ना
राम अँगना में पोखरा खनबों हो ना ॥ ५९५ ॥

बेटी अँगने बँधैबौं चारु घटिया हो ना
बेटी अगने नहैह॰ घरवा जैह॰ हो ना
बेटी पोखरा पर आवे सवदगरा हो ना
बेटी ओहि लागि जैबू लोभाइ हो ना
बेटी बाप के नैयाँ हसैब हो ना ॥ ६०० ॥
बेटी सुनि पैहे बाप ना भैयवा हो ना
बेटी भौसवँ भरैहैं हमनी खलवा हो ना
राम फ़तना बचन तिलकी सुनली हो ना
रानी नाहिँ दिहली अब छुटिया हो ना
राम चलि गैली तिलकी रनियाँ हो ना ॥ ६०५ ॥
राम चलि गैली अपनी अटरिया हो ना
राम सूति रहली अपनी अटरिया हो ना
राम दे देली बजर कँवड़वा हो ना
राम बीति गैले अब दूइ सँझवा हो ना
राम उने ऐली चल्हकी नौनिया हो ना ॥ ६१० ॥
राम देखत बाड़ी तिलकी हवलिया हो ना
राम चलि भैली रानी का पसवा हो ना
राम सुनि लेबू रानी ना मैंनवाँ हो ना
रानी तिलकी बितेला दूइ सँझवा हो ना
रानी दे दीतू अब इहाँ छुटिया हो ना ॥ ६१५ ॥
रानी दूइ घड़ी के दिहली छुटिया हो ना
रामा बोलि उठे रानी मैंनवाँ हो ना
चल्हकी रतिये नहैहे रतिये ऐहे रे ना
राम चलि भैली चल्हकी नौनिया हो ना
राम सुनि ले तिलकी रनियाँ हो ना ॥ ६२० ॥
रानी खोल देहु बजड़ कँवड़वा हो ना
रानी दूइ घड़ी के पौलीं छुटिया हो ना
रानी झट पट खोलली कँवड़वा हो ना
रामा दस पाँच सखिया बटोरली हो ना
रानी गोड़वा मैं डाले गोड़हरवा हो ना ॥ ६२५ ॥
रानी हथवा मैं डाले हथसँकरवा हो ना
रानी बारे बारे मोतिया गुहोली हो ना

रामा कैली सोरह सिँगरवा हो ना
रानी दखिन के चिरवा पहिरली हो ना
रानी चोलिया पेन्हेले मखमलवा हो ना ॥ ६३० ॥
रानी बनवाँ लगावे अनमोलवा हो ना
रामा लिलरा पर साटेले बेंदुलिया हो ना
रानी नैना में करेले कजरवा हो ना
रामा जैसे ऊगे दुजिया के चँदरमाँ हो ना
रानी दरपन में देखे मुँहवाँ हो ना ॥ ६३५ ॥
रानी घीँच मोक मारे आपनि छतिया हो ना
दैवा काहे के दिहल॰ सुरतिया हो ना
दैवा मोरे कन्ता भैले निरमोहिया हो ना
दैवा हमरे जोअल धिरकरवा हो ना
रामा सभ सखि भैली तेअरवा हो ना ॥ ६४० ॥
रानी पहिल देवढ़ लात डलली हो ना
रामा बाँवे अलङ्क काग बोलले हो ना
रानी अगवाँ के लात पछवाँ डललो हो ना
रामा सुनि लेब॰ कगवा कुलच्छन हो ना
कगवा तोहरा के देबोँ दुध भात खोरवा हो ना ॥ ६४५ ॥
कगवा पुरुस के बटिया देखेह॰ हो ना
रानी दोसर देवढ़ लात डलली हो ना
रामा टिकुली टपक भुँइयाँ गिरली हो ना
रामा बोलि उठे तिलकी रनियाँ हो ना
रामा सुनि लेबे सखिया सलेहरी रे ना ॥ ६५० ॥
रामा बारह बरिस बीत गैले हो ना
रामा कबही ना फरके मोर टिकुलिया हो ना
सखी एकर सभ कर॰ ना बिचरवा हो ना
रानी एकर कवन करोँ मैं बिचरवा हो ना
रानी तेसर देवढ़ लाँघि गैली हो ना ॥ ६५५ ॥
रामा टुटि गैले चोलिया के बँदवा हो ना
सखी काहे लागि टुटे चोलि बँदवा हो ना
सखी एकर सभ कर॰ ना बिचरवा हो ना
रानी तोरे कन्ता आवे पोखरवा हो ना

रानी ओहि लागि टुटे चोलि बँदवा हो ना ॥ ६६० ॥
रानी चौथ देवढ़ लात डलली हो ना
रामा फुफुति फरकी भुँइयाँ गिरलि हो ना
सखी एकर सभ करु ना बिचरवा हो ना
रानी तोरे मन परे बिअहलवा हो ना
रानी ओहि लागि फरके फुफुतिया हो ना ॥ ६६५ ॥
रामा बोलि उठे तिलकी रनिया हो ना
रामा सुनि लेबे सखिया सलेहरी रे ना
सखी तोहनी करु हम से मसखरिया रे ना
सखो मोरे कन्ता चोल्हि ले गैलि हो ना
रामा मोरे कन्ता कैले होइहैं दोसर बिअहवा हो ना ॥ ६७० ॥
रामा जो कन्ता अब मोरे रहिते हो ना
रामा कैले रहिते हमरो गवनवाँ हो ना
रानी पचवाँ देवढ़ लात डलली हो ना
रानी छठाँ देवढ़ लाँघि गैली हो ना
रानी सातवाँ देवढ़ लाँघि गैली हो ना ॥ ६७५ ॥
रामा पोखरा बिचे धजवा लोकले हो ना
रामा बोलि उठे चल्हकी नौनिया हो ना
रामा चल्हकी हवी बड़ि सुँहसगिया हो ना
रामा चलि भैली सखिया सलेहरी हो ना
रामा इहवाँ से काग उड़ि चलले हो ना ॥ ६८० ॥
रामा जाइ कुँअरा सिरवा टरैले हो ना
राम बोलि उठे कुँअरा बिजैया हो ना
रामा सुनि लेबे अब सार कगवा रे ना
रामा काइ सार कगवा टरैल० हो ना
रामा बोलि उठे देवी दुरगवा हो ना ॥ ६८५ ॥
कुँअर जनम सनेहिया जूटि ऐली हो ना
कुँअर ओहि लागि कगवा टरैले हो ना
रामा चलि भैले सखिया सलेहरी रे ना
रामा चलि गैली पोखरा के भिँड़वा रे ना
रामा बोलि उठे देबिया दुरगवा रे ना ॥ ६९० ॥
बबुआ सुनि लेब० कुँअरा बिजैया हो ना

बबुआ आइ गैली जनम सनेहिया हो ना
बबुआ ह्वँकि दे जनानी अब घटिया हो ना
रामा उठे कुँअर रोके अब घटिया हो ना
रामा बोलि उठे सखिया सलेहरी हो ना ॥ ६९५ ॥
रामा बोलि उठे तिलकी रनियाँ हो ना
चल्हकी इन ह्वँ के देह न टोकरिया हो ना
रामा सखी लोग करिहँ असननवाँ हो ना
रामा बोलि उठे चल्हकी नौनियाँ हो ना
रानी अपना से देह ना टोकरिया हो ना ॥ ७०० ॥
रामा बोलि उठे तिलकी रनियाँ हो ना
रामा सुनि लेब॰ पोखरा सौदगरवा हो ना
बबुआ कहाँ तोहार घरवा दुअरवा हो ना
बबुआ कहँवा के कैल॰ पर्‌ँतवा हो ना
रामा घर मोर ह्वे घुनघुनवा हो ना ॥ ७०५ ॥
रामा चलि ऐलीं गढ़ परबतवा हो ना
रामा बोलि उठे सखिया सलेहरी हो ना
रवाँ छाड़ि दीं जनानी अब घटिया हो ना
रामा सखी लोग करिहँ अब असननियाँ हो ना
रामा बोलि उठे कुँअर बिजैया हो ना ॥ ७१० ॥
सखी एक पहर दतुअनियाँ हो ना
सखी दूइ पहर असननियाँ हो ना
सखी तीसर पहर देवी पुजनवाँ हो ना
सखी चौथ पहर दाना दुनियाँ हो ना
सखी पचवाँ पहर मोर तेअरिया हो ना ॥ ७१५ ॥
सखी छठाँ पहर घाट छोड़बोँ हो ना
रामा बोलि उठे तिलकी रनियाँ हो ना
रामा सुनि पैहँ बावन सुबवा हो ना
रामा भुसवन भरैहँ तोहरि खलिया हो ना
रामा एतना बचन कुँअर सुनले हो ना ॥ ७२० ॥
रामा कैसन ह्वे बावन गरभी सुबवा हो ना
रामा ससुर के देखबोँ सुबैया हो ना
रामा बोलि उठे तिलकी रनियाँ हो ना

रामा सुनि लेब॰ पोखरा सवदगरवा हो ना
रामा जेकर बाड़ी ऐसन सुरतिया हो ना ॥ ७२५ ॥
रामा कैसन हवी तोहरि महतरिया हो ना
रामा कैसन हवी तोहरि तिरियवा हो ना
रामा कौड़ी लेभे खेदली बहरवा हो ना
रामा उन के जोअल धिरिकरवा हो ना
रामा बोलि उठे कुँअरा बिजैया हो ना ॥ ७३० ॥
रामा कैसन हवी तोहरि महतरिया हो ना
रामा कैसन हवे तोहर पुरुखवा हो ना
रामा जेकर हवी ऐसन सुरतिया हो ना
रामा फुलवा नीअर जेकर देहिया हो ना
रामा बने बने फिरेलू अकेलवा हो ना ॥ ७३५ ॥
रामा उनकर जोअल धिरिकरवा हो ना
दैवा काइ रौरा बाप के नैयाँ हो ना
दैवा का रौरा माँता के नैयाँ हो ना
दैवा का रौरा भैया के नैयाँ हो ना
दैवा का रौरा भौजी के नैयाँ हो ना ॥ ७४० ॥
रामा बोलि उठे कुँअर बिजैया हो ना
सखी का रौरा बाप के नैयाँ हो ना
सखी का रौरा माँता के नैयाँ हो ना
रामा बोलि उठे तिलकी रनियाँ हो ना
दैवा बाप के नाम बावन सुवा हो ना ॥ ७४५ ॥
दैवा भैया के नाम मानिक चँदवा हो ना
दैवा माँता के नाम मैनवाँ हो ना
रामा बोलि उठे कुँअर बिजैया हो ना
सखी बाप के नाम गोरख सिंघवा हो ना
सखी माँता के नाम घघेलवा हो ना ॥ ७५० ॥
सखी भैया के नाम धीर छतिरी हो ना
सखी भौजी के नाम सोनमतिया हो ना
रामा बोलि उठे तिलकी रनियाँ हो ना
दैवा काइ हवे ससुरवा नमवाँ हो ना
दैवा काइ हवे सरवा नमवाँ हो ना ॥ ७५५ ॥

दैवा काइ हवे सासु के नमवाँ हो ना
दैवा काइ हवे रौरा तिरिया के नमवाँ हो ना
रामा बोलि उठे कुँअर बिजैया हो ना
सखी काइ तोरे ससुर के नमवाँ हो ना
सखी का तोरे भसुर के नमवाँ हो ना ॥ ७६० ॥
सखी का तोरे गोतिनी के नमवाँ हो ना
सखी का तोरे सैंयाँ के नमवाँ हो ना
रामा बोलि उठे तिलकी रनियाँ हो ना
दैवा ससुर के नाम गोरख सिँघवा हो ना
दैवा भसुर के नाम धीर छतिरी हो ना ॥ ७६५ ॥
दैवा सासु जी के नाम घघेलवा हो ना
दैवा गोतिनी के नाम सोनमतिया हो ना
दैवा सैंयाँ के नैंयाँ नाहिँ जनल्यूँ हो ना
रामा बोलि उठे कुँअरा बिजैया हो ना
सखी ससुर जी के नैंयाँ बावन सुबवा हो ना ॥ ७७० ॥
सखी सासु जी के नाम मैनवाँ हो ना
सखी तिरिया के नाम हम नाहिँ जनलों हो ना
रामा एतना बचन तिलकी सुनली हो ना
रामा अँगवाँ के मोंह पाछे फेरली हो ना
रामा बोलि उठे चल्हकी नौनियाँ हो ना ॥ ७७५ ॥
रामा सुनि ले अब ननदोइया हो ना
रामा बिन गवने बतियौलऽ हो ना
कुँअर इहाँ लगिहैं तोहरा नेगवा हो ना
रामा एक ही मोहर कुँअर दिहले हो ना
रामा बोलि उठे चल्हकी नौनियाँ हो ना ॥ ७८० ॥
कुँअर भलि भाँति पूरब चौकवा हो ना
कुँअर पढ़ल पँडितवा बोलैबी हो ना
कुँअर भलि भाँति गवना तऽ करैबी हो ना
रामा बोलि उठे कुँअरा बिजैया हो ना
रामा छत्तिस देवता सिर उठौलों हो ना ॥ ७८५ ॥
रामा जब ले नाहिँ कटबों बाप के बेरियवा हो ना
रामा बोलि उठे देबिया दुखगवा हो ना

कुँअर फानि घोड़ा होख॰ असवरवा हो ना
कुँअर इह छवी सखिया सलेहरी हो ना
कुँअर तोंहि रखिहैं अब भोराइ हो ना ॥ ७९० ॥
कुँअर आगे पाछे जन तकिह॰ हो ना
रामा प्रतना बचन कुँअर सुनले हो ना
रामा प्रतना बचन तिलकी सुनली हो ना
रामा धाइ तिलकी धरे घोड़ा बगिया हो ना
सामी सुनि लेब॰ हमरि बचनिया हो ना ॥ ७९५ ॥
सामी बारह बरिस बीत गैले हो ना
सामी सेंदुरा के कैलौं सपनवाँ हो ना
सामी आजो मोर सेंदुर बऊरले हो ना
सामी अजुए के राति डेरा डलित॰ हो ना
सामी मोरे देहे उठेला अगिनियाँ हो ना ॥ ८०० ॥
सामी आजु मोरि अगिनि बुझैत॰ हो ना
रामा बोलि उठे कुँअरा बिजैया हो ना
रामा सुनि लेबू पातरि तिरियवा हो ना
तिरिया कैसे में अगिनि बुतैबों हो ना
तिरिया देवी दुरगा कंठवा में रखलौं हो ना ॥ ८०५ ॥
तिरिया सभ देवता होइहैं ना बिछोहवा हो ना
तिरिया जुझि जैबौं झाड़ मैदनवाँ हो ना
रामा प्रतना बचन तिलकी सुनली हो ना
तिलकी रोवें लगली जार बे जरवा हो ना
सामी अजुए से मोरा के तिअगले हो ना ॥ ८१० ॥
रामा बोलि उठे कुँअरा बिजैया हो ना
तिरिया मनवाँ मे धर॰ ना धिरिजवा हो ना
तिरिया रन जीति घरवा चलबौं हो ना
रामा प्रतना बचन के सुनलवे हो ना
सामी जबे छुड़बौं घोड़ बगवा हो ना ॥ ८१५ ॥
सामी आजु कुछु गुनवाँ देखैब॰ हो ना
रामा कुँअर उहाँ प्रड़वा दबौले हो ना
हिच्छल उड़ि लागे अब अकसवा हो ना
रामा चलि भैली सखिया सलेहरी रे ना

रामा चलि गैली रँगवा महलिया हो ना ॥ ८२० ॥
रामा जहाँ बाटे रानी ना मैनवाँ हो ना
रामा सनमुख परलि नजरिया हो ना
दैवा बोलि उठे रानी त० मैनवाँ हो ना
रामा सुनि लेबे तिलकी त० रनियाँ रे ना
बेटी दूइ घड़ी के दिहलीं छुटिया रे ना ॥ ८२५ ॥
बेटी कहवाँ गँवलू सारि रतिया हो ना
बेटी काहे तोर चेहरा उदसवा हो ना
रामा पोखरा के बड़ि करिगरिया हो ना
रामा फिरि फिरि देखलीं पोखरवा हो ना
अँमा उहवें गँवलीं सारि रतिया हो ना ॥ ८३० ॥
अँमा झाड़ि बहेला पछिमवा हो ना
अँमा ओहि लागि चेहरा उदसवा हो ना
रामा प्रतना बचन के सुनलवे हो ना
रामा सखी अपने अपने गैली अटरिया हो ना
रामा उहाँ बोले देवी ना दूखवा हो ना ॥ ८३५ ॥
कुँअर सुनि लेब० हमरि बचनिया हो ना
कुँअर इहाँ बनल तोहरि सँतिया हो ना
रामा पहिलि लड़ैया मानिक चँदवा हो ना
रामा दूसरि लड़ैया बावन सुबवा हो ना
रामा चलि गैले जिरऊल किलवा हो ना ॥ ८४० ॥
रामा उहवाँ बहेले झिरझिर नदिया हो ना
रामा घोड़वा पनावे कुँअर नदिया हो ना
रामा छुटि तेगा गिरे ओहि नदिया हो ना
रामा झङ्के लागे कुँअर बिजैया हो ना
रामा काऊ के कहल नाहिं मनलीं हो ना ॥ ८४५ ॥
रामा अपने से ऐलीं जेहलखनवाँ हो ना
रामा तेगवा गिरल झिरझिर नदिया हो ना
रामा अब कवन करब मनुसैया हो ना
दैवा बोलि उठे हिच्छल बछेड़वा हो ना
बबुआ छतिरी के कोखिया जनमल० हो ना ॥ ८५० ॥
बबुआ प्रतने में गैल० अकुलैया हो ना

बबुआ जाहि घड़ी लगिहें लोहवा जुझरवा हो ना
बबुआ उहाँ कैसे अँगेजब॰ हो ना
बबुआ सात नदी रुधिर बमकिहें हो ना
बबुआ इहाँ कर॰ कठिन करेजवा हो ना ॥ ८५५ ॥
रामा बोलि उठे हिक्कला बक्केड़वा हो ना
कुँअर कसिअ कें धरिह॰ लगमिया हो ना
बबुआ खिलि जैबों झिरझिर नदिया हो ना
बबुआ दँतवन तेगवा निकालबों हो ना
रामा तेगवा निकालि हिच्छल लेले हो ना ॥ ८६० ॥
रामा चलि भैले हिच्छल बक्केड़वा हो ना
रामा चलि भैले जिरञ्जल किलवा हो ना
रामा उपर लागल कठ बँसवा हो ना
रामा निचवा लागल बबुरनियाँ हो ना
रामा ताहि बिचे जिरञ्जल किलवा हो ना ॥ ८६५ ॥
रामा काटि घललें अब बबुरनियाँ हो ना
कुँअर तेगवन काटे कठ बँसवा हो ना
रामा किला भीतर लेले पैसरवा हो ना
रामा चारु ओर कुँअर घूमि ऐले हो ना
रामा कतहीं ना मिले पैसरवा हो ना ॥ ८७० ॥
रामा एक ओर रहे निकसरवा हो ना
रामा हनल रहे बजड़ कँवड़वा हो ना
रामा उहाँ हिच्छल मारे हनि टपवा हो ना
रामा टुटि गैले बजड़ कँवड़वा हो ना
रामा उहाँ रहले दूइ चौकिदरवा हो ना ॥ ८७५ ॥
रामा बोलि उठे देबी तो दुरुगवा हो ना
बबुआ सुनि लेब॰ कुँअर बिजै मल हो ना
बबुआ बनल बाड़ि तोहरि सैतिया हो ना
बबुआ इहाँ कर॰ समझतवा हो ना
कुँअर मारि घाले दूनो जना सिरवा हो ना ॥ ८८० ॥
रामा खँड़वा के रुधिर चिखौले हो ना
रामा दूसर देवढ़ कुँअर काटले हो ना
रामा तीसर देवढ़ काटि गैले हो ना

रामा चौथे देवढ़ काटि गैले हो ना
रामा पँचवाँ देवढ़ काटि गैले हो ना ॥ ८८५ ॥
रामा छव देवढ़ काटि गैले हो ना
रामा उहाँ रहले सभ ना बनियवाँ हो ना
रामा बैठल रहले मुनसी देवनवाँ हो ना
रामा लिखत रहले बँधुअन रसतवा हो ना
रामा बोलि उठे देवी ना दुखवा हो ना ॥ ८९० ॥
रामा मारि घालब सभ ना बनियवाँ हो ना
कुँअर मारि घालब मुनसी देवनवाँ हो ना
कुँअर मारि काटि कैले मैदनवाँ हो ना
कुँअर सतवाँ देवढ़ काटि घलले हो ना
रामा तेगवा के फल झरि गैले हो ना ॥ ८९५ ॥
रामा बाँधल रहले सभ ना बँधुअवा हो ना
रामा नजर परले सभ ना बँधुअवा हो ना
रामा रोवे लगले सभ ना बँधुअवा हो ना
रामा किया हवे राजा मानिक चँदवा हो ना
रामा किया राजा हवे बावन सुववा हो ना ॥ ९०० ॥
रामा बोलि उठे सभ ना बँधुअवा हो ना
रामा अब राजा करिहैं कवन हवलिया हो ना
रामा बोलि उठे कुँअरा बिजैया हो ना
रामा नाहिं हवे ससुर बावन सुववा हो ना
बँधुए मोरे नाम कुँअर बिजैया हो ना ॥ ९०५ ॥
बबुआ मनवाँ मैं धरब ना धिरिजवा हो ना
बबुआ सभ कर सेंनुरा बजराइब हो ना
रामा काटे लगले बँधुआ बेरियवा हो ना
बबुआ काटि कूटि कैले मैदनवा हो ना
रामा बोलि उठे कुँअरा बिजैया हो ना ॥ ९१० ॥
रामा सुनि लेब सभ ना बँधुअवा हो ना
बबुआ लूटि लह बावन बजरिया हो ना
बबुआ लूटि लाटि चलले बावन पोखरवा हो ना
रामा बोलि उठे कुँअरा बिजैया हो ना
रामा खोजे लगले बाप ना भैयवा हो ना ॥ ९१५ ॥

रामा काइ भैले बाप गोरख सिँघवा हो ना
रामा काइ भैले भैया धीर छतिरी हो ना
रामा किया सूबा फँसिया दियौले हो ना
रामा बोलि उठे बाप गोरख सिँघवा हो ना
रामा किया हवे भूत बैतलवा हो ना ॥ ९२० ॥
रामा बोलि उठे कुँअरा बिजैया हो ना
भैया नाहिँ हवे भूत बैतलवा हो ना
बबुआ अपने से ऐलौं जेहलखनवाँ हो ना
बाप मोर नाम कुँअरा बिजैया हो ना
रामा बोलि उठे बाप गोरख सिँघवा हो ना ॥ ९२५ ॥
बबुआ अपने से ऐल० जेहलखनवाँ हो ना
बबुआ कुलवा में एकला फतिँगवा हो ना
बबुआ बँसवा के कैल० निधनवा हो ना
बबुआ कैसे छूड़ि ऐले सोनमतिया हो ना
बबुआ तोरि भौजी परनवाँ के अधरवा हो ना ॥ ९३० ॥
रामा उहाँ कुँअर सुमिरे देवी दुरगा हो ना
रामा उहाँ कुँअर चकवा उलटले हो ना
रामा सनमुख परेले नजरिया हो ना
रामा रोवे लगले कुँअरा बिजैया हो ना
बाप एतना सासत सुबवा कैले हो ना ॥ ९३५ ॥
रामा बोलि उठे बाप गोरख सिँघवा हो ना
रामा रोवे लागे बाप ना भैयवा हो ना
दैवा बोलि उठे बाप गोरख सिँघवा हो ना
बबुआ ओह जनमे ऐलौं लिखाइ हो ना
बबुआ जवन भोग कैलौं बावन किलवा हो ना ॥ ९४० ॥
बबुआ बोलि उठे राजा गोरख सिँघवा हो ना
बबुआ फिरि जा देस ना मुलुकवा हो ना
बाप अब ले मैं रहलौं अकसर जिअरवा हो ना
बाप अब भैली तीनि अब सुबवा हो ना
बाप जवनि अलङ्क अब तकबौं हो ना ॥ ९४५ ॥
बाप किलवा दखल के घलबौं हो ना
रामा चलि भैले कुँअरा बिजैया हो ना

रामा फुँकि दिहले बावन जेहलखनवा हो ना
रामा फुँकि के आवे बावन पोखरवा हो ना
रामा चलि ऐले भँवरा पोखरवा हो ना ॥ ९५० ॥
रामा एक नौआ चललि बरिअतिया हो ना
कुँअर सभ के पकड़ि मँगोले हो ना
नौआ एह सभ के बनाव॰ हजमतिया हो ना
रामा उहवाँ खरिदले कपड़वा हो ना
रामा उहवाँ बनोले जेवनरवा हो ना ॥ ९५५ ॥
रामा सभ बँधुअन कैले असननवाँ हो ना
रामा जेइ जैसन रहले सरदरवा हो ना
रामा जेइ जैसन कैले पहिरनवाँ हो ना
रामा बोलि उठे कुँअरा बिजैया हो ना
पच्चे सभे मिलि जाईं अपने गिरिहिया हो ना ॥ ९६०॥
पच्चे बाँचि जैहें अकसर जिअरवा हो ना
पच्चे सभे मिलि दिहीं असिरवदवा हो ना
पच्चे रन जीति घरवा ऐबाँ हो ना
पच्चे बोलि उठे सभ ना बँधुअवा हो ना
पच्चे कुअर रवाँ पाछे करब गोहरिया हो ना ॥ ९६५ ॥
रामा बोलि उठे कुँअर बिजैया हो ना
पच्चे सभे जाईं अपना अपना देसवा हो ना
रामा चलि गैले सभ ना बँधुअवा हो ना
रामा बाँचि गैले बाप ना भैयवा हो ना
रामा बोलि उठे कुँअर बिजैया हो ना ॥ ९७० ॥
रामा सुनि लेब॰ हिच्छल बछेड़वा हो ना
घोड़ा ले जा बाप ना भैयवा हो ना
रामा उड़ि हिच्छल लगले अकसवा हो ना
रामा चलि गैले देस घुनघुनवा हो ना
रामा नजरी परेलि सोनमतिया हो ना ॥ ९७५ ॥
रामा जरि मरि होखेले खँगरवा हो ना
हिच्छल कहवाँ के मढ़ी टँगले ऐल॰ हो ना
रामा मोर परान कहवाँ कूड़ ऐल॰ हो ना
हिच्छल जलदी से जा कुँअर पसवा हो ना

हिच्छल अवरी रन जीति ऐबन हो ना ॥ ९८० ॥
हिच्छल सोनवाँ मढ़ैबों तोहर खुरिया हो ना
रामा चलि ऐले हिच्छल बछेड़वा हो ना
रामा जहाँ बाघ मारेले असनवाँ हो ना
रामा सभ हाल सोनवाँ कुँअर कहले हो ना
रामा बोलि उठे देबी दुरगवा हो ना ॥ ९८५ ॥
बबुआ बनल बाड़ि तोहरि सैतिया हो ना
बबुआ चढ़ि चलन भँवरानन इनरवा हो ना
रामा पोखरा के गरद मिलैले हो ना
रामा इनरा पर डाले कुँअर डेरवा हो ना
रामा उन्ने ऐली बावन पनिहरिया हो ना ॥ ९९० ॥
रामा उहँ करे मसखरिया हो ना
रामा बोलि उठे कुँअरा पनिहरिया हो ना
रामा कहवाँ के हवे मोसफिरवा हो ना
रामा सुनि पैहें राजा बावन सुबवा हो ना
बबुआ भुसवन भरैहें तोहरि खलिया हो ना ॥ ९९५ ॥
रामा प्रतना बचन कुँअरा सुनले हो ना
कुँअरा फोरि देले सभन के घरिलवा हो ना
रामा छिनि लेले सभे अभरनवाँ हो ना
रामा सभे लौंड़ी चलली उघरवे हो ना
रामा चलि गैली बावन कचहरिया हो ना ॥ १००० ॥
रामा बोलि उठे सभ ना लौंड़िया हो ना
रामा सुनि लेबन बावन गरभी सुबवा हो ना
सुबवा कहवाँ के ऐले प्रक सुबवा हो ना
रामा सभ बँधुअन कटले बेरियवा हो ना
रामा लूटि लेले बावन बजरिया हो ना ॥ १००५ ॥
रामा फूँकि देले जिरऊल किलवा हो ना
रामा पोखरा के गरद मिलौले रे ना
राजा हमनी सभ के कैले दुरदसवा रे ना
रामा तोरि सूवा लागल बँहियाँ घुनवाँ रे ना
रामा प्रतना बचन सुबवा सुनले हो ना ॥ १०१० ॥
रामा सूवा जरि मरि होले ना खँगरवा हो ना

रामा सुनि लेबे बेटा मानिक चँदवा रे ना
बेटा साजि लेऊ अपनि फौजिया हो ना
बबुआ भिड़ि लेऊ भँवरानन हथवा हो ना
रामा सरवा के पकड़ि मँगैह॰ हो ना ॥ १०१५ ॥
रामा ओकर देखब सुरतिया हो ना
रामा सरवा से घसिया गढ़ैबों हो ना
रामा उहाँ सूबा साजेले फौदिया हो ना
रामा धुरिया लागेला असमनवाँ हो ना
रामा बजवा बाजे जुझरवा हो ना ॥ १०२० ॥
रामा बोलि उठे देवी दुरगवा हो ना
कुँअर इहे हवे मानिक पलटनियाँ हो ना
रामा घोड़वा नचावे कुँअर मैदनवाँ हो ना
रामा सनमुख भैले जबबवा हो ना
रामा घेरि लिहले सभ ना फौदिया हो ना ॥ १०२५ ॥
रामा लागि गैले लोहवा जुझरवा हो ना
रामा मारे लागल कुँअरा बिजैया हो ना
रामा देवी दुरगा कैली छतर छहियाँ हो ना
रामा काटि कूटि कैले मैदनवा हो ना
रामा बाँचि गैले राजा मानिक चँदवा हो ना ॥ १०३० ॥
रामा उन हूँ के नाक काटि धलले हो ना
रामा कनवाँ काटि अब धलले हो ना
रामा बँहियाँ काटि धलले हो ना
रामा बाँधि देले घोड़ा के पिछड़िया हो ना
रामा चलि गैले राजा मानिक चँदवा हो ना ॥ १०३५ ॥
रामा जहाँ लागे बावन कचहरिया हो ना
रामा सनमुख परलि नजरिया हो ना
रामा खिसियँ भरल मतवलवा हो ना
रामा बोलि उठे बावन गरभी सुबवा हो ना
रामा सारे जुझि जैत॰ झाड़े मैदनवाँ हो ना ॥ १०४० ॥
रामा कनवाँ कटाइ धरवा ऐल॰ हो ना
रामा छतिरी के कोखिया जनमल॰ हो ना
रामा प्रतना बचन बावन सुनले हो ना

रामा उहाँ सूबा साजे पलटनियाँ हो ना
रामा चलि भैले बावन गरभी सुबवा हो ना ॥ १०४५ ॥
रामा सूबा चलि ऐले झाड़े मैदनवाँ हो ना
रामा लागि गैले लोहवा जुझरवा हो ना
रामा कुँअर मारि काटि कैले मैदनवाँ हो ना
रामा बाँचि गैले राजा बावन सुबवा हो ना
रामा कर जोरि करेला बिनतियाँ हो ना ॥ १०५० ॥
बबुआ सुनि लेब॰ हमरि बचनियाँ हो ना
कुँअर हम हवीं तोहरे ना ससुरवा हो ना
बबुआ छाड़ि देब॰ हमर जिअरवा हो ना
रामा फानि कुँअर मारे उनकर सिरवा हो ना
रामा काटि कूटि कैले मैदनवाँ हो ना ॥ १०५५ ॥
रामा चलि ऐले बावन सूबा गढ़वा हो ना
कुँअरा मनवाँ मैं करेला घमंडवा हो ना
रामा नाहिं रहिते जाँघे मोरा जोरवा हो ना
रामा नाहिं बँहियाँ रहिते बौसैया हो ना
रामा काइ करती देवी ना दुरगवा हो ना ॥ १०६० ॥
रामा देवी दुरगा भैली ना बिछोहवा हो ना
रामा घोड़ा कुँअर गिरेले इनरवा हो ना
रामा ऊँचि ना अटारी तिलकी चढ़ली हो ना
रामा तिलकी के परलि नजरिया हो ना
तिलकी उहवाँ चलावे इनर बनवाँ हो ना ॥ १०६५ ॥
रामा चलि ऐली तिलकी रनियाँ हो ना
रामा चलि ऐली चल्हकी नौनियाँ हो ना
रामा कुअरा के बँहियाँ पकड़ली रे ना
रामा लेइ गैली बुधुआ कोँहरा के चकवा रे ना
रामा बोलि उठी तिलकी रनियाँ रे ना ॥ १०७० ॥
बुधुआ अबकी के सेँनुरा बहोरिहै रे ना
बुड्डू आधा राज तोहरे के बटयूँ हो ना

रामा चल्हकी पढ़ल पण्डित बोलौली हो ना
रामा भलि भाँति भैले गवनवाँ हो ना

रामा आधा राज दिहले अब काँहरे रे ना ॥ १०७५ ॥
रामा आधा राज दिहले अब बम्हने हो ना
रामा कुँअरा गैले दुअरा का सोझवा रे ना
रामा छोट भैया रहले सुरुज मलवा रे ना
बबुआ भल कुँअर ऐले अब दुअरवा रे ना
बबुआ इन हूँ के मारऽ अगिनि बनवाँ हो ना ॥ १०८० ॥
रामा छोड़त बाड़े अब अगिनि बनवाँ रे ना
रामा जरे लागल कुँअरा बिजैया रे ना
रामा तीनि लोक सुमिरे आपन सतवा रे ना
रामा जोरे सत होखऽ ना सहैया हो ना
रामा ऊहो तो मारेली इनर बनवाँ रे ना ॥ १०८५ ॥
रामा कुँअरा के लेले बचाइ रे ना
तिलकी लेइ लेले हाथ मैं तेगवा रे ना
तिलकी सभ कर मूँड़ि मारि घलली हो ना
रामा गोदिया मैं रहले एक छोटका भैयवा रे ना
रामा बबुआ लेइ चलबों रे ना ॥ १०९० ॥
सामी भैया के नतवा लगैबों रे ना
सामी कोइला बोरेबों बावन गढ़िया हो ना
रामा डँड़िया फनाइ कुँअर चलले हो ना
रामा बिचे रास्ते देले ना मोकमवाँ हो ना
रामा हम सुतबों कुँअर के गोदिया हो ना ॥ १०९५ ॥
रामा कुँअरा के लागि गैले निंदिया रे ना
सरवा लेले रहले कृष्णन ना कुरिया रे ना
रामा पेसि देले कुँअरा के नरेटिया रे ना
रामा ऊहो तो लुकैले डाँड़ी भितरा रे ना
रामा लोहिया लागल पह फटले रे ना ॥ ११०० ॥
चल्हकी सामी जी के दह ना जगाइ रे ना
रामा जाइ चल्हकी जगौली रे ना
चल्हकी गिरि परली अब मुरकैया रे ना
रामा रोवे लगली तिलकी रनियाँ रे ना
रामा केनियेाँ के अब नाहिं भैलोँ रे ना ॥ ११०५ ॥
रामा नैहर के नतवा छोड़लीं रे ना

रामा उहाँ चनन गैले मौराइ रे ना
रामा परि गैलि सोना नजरिया रे ना
सोनवाँ गिरि परली अब ना धरतिया रे ना
रामा धैरि चलली अब सोनमतिया रे ना ॥ १११० ॥
रामा धैरि गैली देवी ना चौरवा रे ना
दुरगा जो बलका कैले ना कसुरवा रे ना
हथवा काटि नाहिं बिगवौं रे ना
दुरगा अवरी रन बबुआ जितिहैं रे ना
रामा सोनवें छवैबौं मँडपवा रे ना ॥ १११५ ॥
रामा चलि भैली अब सोनमतिया रे ना
रामा चलि गैली कुँअरा के पसवा रे ना
सोनवाँ उहवाँ सतवा सुमिरली रे ना
रामा चीरि देले अपनि नखुनवाँ रे ना
रामा कुँअरा जियाइ अब घलली रे ना ॥ ११२० ॥
रामा कुँअरा लियाइ घर ऐली रे ना
रामा बाजे लागल अनन्द बधैया रे ना
रामा बोलि उठे रानी सोनमतिया रे ना
हेमियाँ बबुआ के बाड़ि अब सैतिया रे ना
रामा बोलि उठे कुँअरा बिजया रे ना ॥ ११२५ ॥
हेमियाँ भौजी जाइ समुझैह॰ रे ना
भौजो जिन्ह लैका दिहले उपदेसवा रे ना
भौजो सभ के पकड़ि मँगैबौं रे ना
भौजो सभ के पकड़ि मँगौली रे ना
रामा बोलि उठे कुँअरा बिजैया रे ना ॥ ११३० ॥
भौजो सभ लड़िके कर॰ पहिरौआ रे ना
रामा सभ के खियौली मिठैया रे ना
रामा हँसत खेलत लड़िके गैले रे ना
रामा इहाँ कुँअर लेले अिही बसवा रे ना
रामा इहाँ लेले राम जी के नैयाँ रे ना ॥ ११३५ ॥
कुँअरा भारी कैले देवी के पुजनवाँ रे ना
रामा दुरगा बड़ खुस हो गैली रे ना
कुँअरा जुगे जुग जिय॰ ना बरिसवा रे न

इति ।

TRANSLATION.

Invocation.

I invoke the god of this place and earth,* and the village god: then I invoke the feet of my mother, and of my spiritual preceptor. Next I invoke the Brahm of the village, (5) and the sun god Suruj Mal, whose lamp is burning every day. I invoke Mother Ganges, whose water flows in a clear stream. I invoke the five Páṇḍavas, (10) and the heroic Hanumán.† Again I invoke the goddess Durgá: O goddess, be thou a help to my throat as I sing this song. O goddess, if any letters are forgotten, bring them together number by number. (15) Then will I invoke the god Goraiyá‡ of Delhí and the Musalmán saint Subhán Gír.§

With what shall I honour, the god of this place and earth, the village god, the feet of my mother, (20) and of my spiritual preceptor, the Brahm of the village, Suruj Mal, Mother Ganges, the five Páṇḍavas, (25) Hanumán, Durgá, Goraiyá of Delhi, and Subhán Gír.

With oblations will I honour the god of this place and earth, (30) and with grain the village god. With my ten nails (*i. e.*, with reverently joined hands) will I honour my mother's feet, and with yellow cloth my spiritual preceptor's. With incense will I honour the Brahm of the village, and with a stream of milk Suruj Mal, (35) with cakes‖ will I honour Mother Ganges, with a golden brahmanical thread the five Páṇḍavas, and with sweetmeats of clarified butter the heroic Hanumán. With a castrated goat will I honour the goddess Durgá, with a sheet Goraiyá of Delhi, (40) with a fowl Subhán Gír.

Then will I call upon the name of Rám. Now will I sing the ballad of the prince, O gentlemen, hear attentively.

The Ballad.

Up rose¶ Queen Mainá, (45) saying 'hear me, O Chalhkí my maid

* ठैयाँ भुइयाँ is a common compound, meaning 'place.'

† हलुमनवाँ in the text is long form of हलुमान, which is a provincialism for हनुमान.

‡ Goraiyá of Delhi is the God worshipped by Dusádhs and other low-caste tribes, South of the Ganges. Hogs are sacrificed to him.

§ I have been unable to identify this saint.

‖ पिठवें, instr. of पिठवा which is long form of पिट्ठा.

¶ This is the literal translation of बोलि उठे and is so carried out throughout the translation of the poem. The compound, however, means idiomatically 'to speak up.' It does not mean that the person speaking actually got up to speak.

servant.* Up rose Queen Mainá saying, 'Husband, hear my words.† Our daughter has become fit for marriage. Go forth into the country, and have search‡ made for a spouse for her.' (50) King Báwan Súbá§ went away, and sat in his audience-chamber, and the proud Báwan Súbá thus spake, 'Hear, O well-read Paṇḍit, my daughter is ready for marriage. (55) Take with you a barber's‖ lad, go forth into the country, and search for a bridegroom. O Paṇḍit, take money with you, and go forth and search. Search for a house worthy of my house, (60) and search for a boy worthy of my child.¶ Search for a co-father-in-law worthy of a co-father-in-law.' On hearing** these words the Paṇḍit took money, and a barber lad (65), and went forth to the south country, but he found not a boy worthy of Tilkí.†† He searched unsuccessfully in the east country, and in the north. He ran to many cities and returned, (70) but found not a bridegroom worthy of Tilkí. Then he went to Báwan's audience hall, and there the barber lad bowed low‡‡ and made obeisance. The Paṇḍit blessed him, and up rose the proud Báwan Súbá and said (75) 'Tell me the news about the boy.' 'O king, I have wandered to and from many cities, but, lo, your daughter has been born an enemy to you. Nowhere have I found a boy worthy of her? (80) On hearing this, up rose the proud Báwan Súbá and said; 'Go to the west country, to the city of Ghunghun, there is there a great king and a boy worthy of Tilkí.' (85) On hearing this the Paṇḍit went to the city of Ghunghun, into the king's audience-hall. Up rose the Bráhman Paṇḍit and said, 'hear my humble petition.§§ (90) Your majesty has two sons, I would see the goods which your Majesty has

* नौनियाँ *lit.* a barber's wife, long form of नउनी, which is fem. of नाऊ, 'a barber.' Women of this caste are much used as domestic servants, and are even indispensable at ceremonies, such as marriages, &c.

† बचनियाँ is a feminine long form of बचन, 'a word.' This form gives a diminutive sense, something like, 'my dear little word'.

‡ खोजैतऽ is preterite conjunctive, in the rare sense of an Imperative. It is from √ खोजाव, the causal form of √ खोज.

§ This is evidently the name of the king, but there appears to be some confusion with the fifty-two Súbás mentioned in the well-known Alhá and Rúdal.

‖ In arranging a marriage a barber is the recognized negotiator.

¶ लड़िका is here used, in common gender, to signify 'child'. It refers to the king's daughter.

** सुनलवे is locative of सुनलवा, which is long form of सुनल, which is the verbal noun of √ सुन, 'hear'.

†† The name of the Princess.

‡‡ नइ indecl. participle of √ नव to bow.

§§ बचनियाँ as before noted is diminutive.

for sale.'* On hearing this, up rose king Gorakh Singh and said, 'Hear, my son, Randhír. (95) Tell the damsel Hemiyá to bring the prince.' Up rose Randhír the Chhattrí, 'hear O damsel Hemiyá, (100) bring now the prince.' The damsel Hemiyá brought him, and the well-read Paṇḍit inspected him, and was satisfied,† 'O king, how much *Tilak*‡ will you take for the prince.' (105) Up rose king Gorakh Singh and said, 'Hear, O well-read Paṇḍit, nine hundred thousand will I take as a *Tilak*, six hundred thousand as a dowry,§ four hundred thousand at the ceremony of *Duár púja*,‖ (110) three hundred thousand when the prince puts on his sacred thread, and two hundred thousand at the ceremony of *kanhwárí*.¶ On these conditions, O Paṇḍit, will I give the prince in marriage'. On hearing this, the Paṇḍit returned to the castle in the mountains, (115) into the audience chamber of his king. Up rose the well-read Paṇḍit and said 'O king, hear my petition. There *is* a co-father-in-law worthy of you as co-father-in-law. There *is* a boy worthy of your child. (120) There *is* a house worthy of your house, but he asks for many rupees. He asks for a *Tilak* of nine hundred thousand, for a dowry of six, for four at the ceremony of *duár pújá*, (125) for three when the prince puts on the sacred thread, and for two at the ceremony of *kanhwárí*. On hearing these words, O king, I agreed to the terms, and eight days hence I fixed as the day for the wedding.' (130) Up rose the proud king Báwan Súbá and said. 'Hear, O my son Mánik Chand. Open quickly the treasury and send an invitation** to some of the brotherhood. Load carts with provisions. (135) Tighten the pad on Bhãwaránan the elephant,†† mount him and go to the land of Ghunghun. There offer‡‡ the *Tilak* for the prince.' Hearing these words Prince Mánik Chand departed, (140) and went till he reached the land of Ghunghun. He arrived

* **सौदा** is goods for sale. Here it refers to the king's marriageable son. In certain castes, in which it is difficult to find a fit husband for a girl, a high price is paid to the parents of a suitable boy, to induce them to consent to the marriage. This price is made up of various items, *viz.*, the *Tilak* &c., mentioned further on.

† **मनमनवाँ** is long form of **मनमान** 'satisfaction.'

‡ The *Tilak* is the price paid to bridegroom, on the settlement of the marriage.

§ The present given to the bridegroom after the marriage, on leaving the bride's house.

‖ The ceremony of welcoming the bridegroom at the bride's house.

¶ The ceremony of presenting a loin-cloth *(kanhâwar)* to the boy-bridegroom. The name is derived from *kandhá*, a shoulder, because at the time of gift, it is laid on the shoulder of the recipient.

** √ **नेवँत** means, in Bhojpúrí 'invite.' The Maithil form is **नेबाँत**.

†† **हथवा** is long form of **हत्था** a male elephant.

‡‡ *lit.* 'lay upon the prince's (head),' the technical term for the ceremony.

at the king's doorway, and saith king Gorakh Singh, 'Hear, my son Randhir Chhattrí, (145) the *Tilak* of the prince has come, haste and make the necessary preparations. Quickly give them *sharbat*, and inquire as to what will be a lucky time for the marriage.'

He called a well-read Paṇḍit, (150) 'O Paṇḍit, hear my words. Haste and look for a lucky time.' Up rose the well-read Paṇḍit and said, 'O king, now is an excellent lucky time; haste and offer the *tilak*.' (155) Up rose now Randhir Chhattrí and said, 'Prince Mánik Chand, hear me, come now within the courtyard, and haste to offer the *tilak*.

Kūar Bijai* sate himself down, (160) with some of his relations and Mánik Chand, and now arose the (sound of) marriage songs. They now commence to offer the *tilak*, and behold, it was offered. (165) They then all went into the outer hall, and in excellent manner were called to dinner.† The whole assembly ate and drank and became ready. Excellent was the manner in which they were ready. The eighth day was the one fixed for the wedding (at the bride's house), (170) and Mánik Chand returned to his palace.

Up rose king Gorakh Singh and said, 'Hear, my son Ran-dhír Chhattrí, send invitations abroad, and in excellent manner make ready the wedding procession.' (175) On hearing these words he invited many of his brotherhood, and in excellent manner made ready the marriage procession. In excellent manner did king Gorakh Singh the mighty prince, make ready the procession and set out.‡ (180) They arrived at the country of the fortress in the mountains, and Gorakh Singh sent news of his arrival. 'Ho watchman, hear; go to the King's audience chamber and tell him (185) that the procession of the monarch has come.' The news reached the king,§ and then said Báwan Súbá, 'Hear, O my son Mánik Chand; in excellent manner escort the procession, (190) to the fortress of Jirhul.' On hearing these words Mánik Chand escorted the procession and caused them all to enter the fortress,

* This is the name of the prince, who was the boy-bridegroom.

† बोलें is the summoning to dinner, equivalent to the English, 'Dinner is served, my Lady,' of the fashionable novel.

‡ This marriage procession is the one in which the boy-bridegroom is carried in state to the bride's house for the wedding ceremony. After the ceremony the party return with like pomp leaving the bride with her parents. When the bride is old enough for the consummation of the marriage, she is fetched in a similar manner to the bridegroom's house. This last ceremony is called the *gaunā*, and will be referred to later on in the poem. See vv. 777 and *ff*.

§ किहाँ is a contraction of the weak genitive termination क and of the pronominal adverb इहाँ 'here.

and there he imprisoned them.* (195) Then was the lucky time (for the marriage). They tied the prince's (*i. e.*, the boy bridegroom's) horse under a Nim tree, sent for some of the brotherhood (of the bride), and in excellent manner the marriage takes place. (200) But all the rest of the marriage procession they imprisoned. Then up rose king Bawan Súbá and said, 'Hear, O my son Mánik Chand, put fetters on their legs, load their loins with chains, (205) and hammer spikes† under their nails.' Lo, to this condition did Mánik Chand bring them.

In the meantime the prince-bridegroom had entered the marriage shrine‡ where there was an image of the goddess Durgá. Now at this time the horse (of the prince which had been tied up under the Nim tree) thought within himself, (210) 'O goddess Durgá, hear me. Art thou the guardian deity of the Prince's childhood? All the rest of his marriage procession has Báwan cast into jail.' Behold, the horse cuts his heel ropes with his teeth, (215) he cut§ all his heel ropes. Then he went to the marriage canopy, while the prince was inside in the shrine.

Now the horse winks to him, and says, 'Hear Prince Bijai. (220) All the rest of the procession hath Báwan Súbá enticed into the fortress of Jirhul. Only (yourself) one little grasshopper has escaped. You are a fool to stay here. Leap upon my back, and ride away.' (225) The Prince leaped upon his back, and the horse Hichchhal flew into the air,‖ between the earth and sky. In the midst he described a circle. The horse traversed the ten countries, (230) and arrived at the city of Ghunghun. In this way did the marriage of the Prince take place.

* *I. e.*, he imprisoned the procession, but not the bridegroom. The cause of this seemingly inexplicable act of treachery is the feeling of revenge which the Rajpút felt towards the man who had given his son in marriage. The giving a son in marriage is looked upon as a great compliment, and as laying the father of the bride under a heavy obligation. To this feeling Gorakh Singh added by demanding an exorbitant price for his son, knowing well that Báwan Súbá must give it, as there was no other marriageable boy fit for the bride. By imprisoning the bridegroom's father Báwan Súbá in the first place gratified his feeling of revenge, and in the second place got a husband for his daughter for nothing.

† **खपचरिया** is long form of **खपचारो** 'a nail' or 'spike.'

‡ The **कोहबर** is the shrine in which the married couple kneel before the tutelary deities of their houses, on the conclusion of the marriage ceremony. The reader may be reminded that both bride and bridegroom were absolute children, incapable of understanding what was going on. The prince, in fact, was too young to remember in after years what had happened.

§ ✓ **काटि घाल** = the Hindí ✓ **काट डाल.** ✓ **घाल** is frequently used as the latter half of an intensive compound in Bhojpúri.

‖ *Lit.* left the solid earth, **धरम** is a repetition of **धरती** without much meaning.

Now the prince's sister-in-law* Sonmati was sitting there, and her eyes fell upon the horse. She became mad with rage,† (235) and up she rose and said 'Hear, thou colt Hichchhal, what has happened to the procession?' Hear Lady‡ Sonmati, said Hichchhal, 'The whole procession is in jail.' (240) Up rose Sonmati and said, 'O Hichchhal, what kind of corpse have you hung to yourself?'

(Here there is a pause during which the horse tells the story to Sonmati.)

So Sonmati was fain to take the prince and console herself with him,—the one little grasshopper of the family.

After hearing all these things, (245) the Prince became twelve years older,§ and one day he went into his father's garden, where the young boys‖ were playing tip-cat.¶ Up rose Prince Bijai and said, (250) 'O boys, hear my little word. I also would play tip-cat with you.' Up rose a young boy and said, 'Hear, Prince Bijai, you are the king of the city.' (255) Up rose Prince Bijai and said, 'In boys' sport, what kingship is there? As a shopkeeper's lad plays, so also would I play tip-cat.' 'Hear, O Prince Bijai, (260) in our play there will be abuse and quarreling.** If the Lady Sonmati hear, she will (kill us, and) fill our skins with chaff.' Up rose Prince Bijai and said, 'Boys, trouble not yourself about this, (265) I will answer for that.' 'Then bring your cat, and we will play with you.' Away went Prince Bijai, (270) to the *Lál Darwájá*†† 'Hear, O sister-in-law Sonmati, I want a cat and stick.'‡‡ 'Hear, O Prince Bijai, what play is there in a cat for you? (275) Play you at gambling, or on the *chaupar*.'§§ When the Prince heard these words, he went inside the *Lál Darwájá* and stretches a sheet over himself from head to foot. He forswears food and water, (280) 'as long as, O sister in-law, a cat is not ready for me.' On hearing these words, she says,

* She was wife of Randhír who had been imprisoned with his father and the rest of the procession in Jirhul.

† खिसिअन is instr. of खिसिया which is long form of खीस 'rage.'

‡ *Lit.* Sister-in-law.

§ *I. e.*, since hearing this story twelve years elapsed, or else time passed, and the prince became twelve years of age. The first interpretation is borne out by verse 385, and the second by verse 504.

‖ लैका = लड़िका. गदेलवा is long form of गदेल 'young.'

¶ गुल्लि डाँड़ is a game closely resembling the English 'tip-cat,' except that the opponent attempts to catch the 'cat' while it is in the air.

** गेँगवा is long form of गेँग 'quarrelling.'

†† The name of a part of his palace which had red doors.

‡‡ सधवा is long form of साध, 'a yearning."

§§ *Chaupar* is the board or cloth divided into four portions on which the game called *pachísi* is played.

'Hear, O damsel Hemiyá, go to Kusahar (the blacksmith's) shop, and quickly call him here.' (285) Away went the damsel Hemiyá to the blacksmith's shop. 'Hear, O Kusahar the blacksmith, Queen Sonmatí calls you.' On hearing these words (290) Kusahar went to the principal chamber in the female apartments, and his eyes fell (on Sonmatí) before him. 'O Lady, what fault have I committed, for never yet have I been called by you. To-day why have you called me? (295) O Lady, quickly give your order.' 'Hear, O Kusahar the blacksmith, the Prince is the support of my life. For his sake have I been patient, for he is the one grasshopper remaining in the family. (300) He it is who refuses food and water. Quickly make him ready a cat.' Away went Kusahar the blacksmith, to where Prince Bijai was. Reverently he makes salutation, (305) 'What kind of cat does your Highness want?' 'O gods! I want a cat of eighty maunds, and a staff of eighty-four, and in eight days must you make it ready.' On hearing these words, (310) Kusahar the blacksmith went home, and began to send for all his acquaintances and family. He invites all his friends and relations, and the casting of the cat began. They all set to work casting the cat and club, (315) but the cat could not be made ready by them. All the friends and relations ran away. Away ran Kusahar the blacksmith, for the cat was not made ready. Kusahar left his house and goes along. (320) On the way he meets Bikramájit.* 'Hear, O Kusahar the blacksmith, into what difficulty have you fallen, that you are running away from here.' 'The chief man of the town is the Prince, (325) and he it is that asks for a cat to be made ready, a cat of eighty maunds, and a staff of eighty-four. He wants the cat made ready in eight days, and it is not so. If Prince Bijaí hear of it, (330) on this account he will (kill me and) fill my skin with chaff. On this account I ran away.' Up rose Bikramájit and said. 'Come along to your shop, and haste and blow up the furnace.' (335) Bikramájit preceded him home, and Kusahar returned. Bikramájit touched the cat and staff, and behold they were made ready. Away went Kusahar the blacksmith (340) to where Prince Bijai was. 'Hear, O Prince Bijai, the cat is now ready.' On hearing these words the prince went to Kusahar's shop, (345) and inspected the cat and the staff. He returned to the *Lál Darwájá*, to the altar-platform of the goddess Durgá. 'Hear, thou goddess Durgá. O mother, thou hast been the guardian deity of my childhood. (350) O mother, trusting in thee have I laid this task† upon myself. Mother, I am going to play tipcat. Mother, give thou strength to my arm.' Prince Bijai went off

* Vikramáditya survives in popular memory as a great enchanter still living in retirement.

† Lit. covered my head with this net.

to where the young boys were playing, (355) and hid* his cat and staff. When they saw him they held consultation† and said, 'You first play against us.' On hearing these words the Prince leaped into the field (360) and began to play against the young boys. He caught all their cats on the hop, and then came his turn to play. All the boys went into the field. He called the goddess Durgá to his memory (365) 'O Durgá, be my help,' and now the prince strikes his cat with the club. All the boys who happened to be in front of it, stood senseless (with the wind caused by it). The cat fell to the ground eighty kos distant. (370) The boys began to consult together, and ran away. Up rose Prince Bijai and said, 'Hear, you base-born boys, I played against you. (375) Why do you not play against me?' On hearing these words, up rose one little boy and said, 'Hear, O Prince Bijai, He who has such strength in his arms, (380) his‡ father is at this very time in prison, and so is his brother. Had you been born in a shopkeeper's house, you would now be supporting yourself weighing§ goods. But you were born from a Chhattrí's womb. (385) You are now twelve years old.‖ Shame on your life. It was at your marriage that they were imprisoned.'¶ When the Prince heard these words, he threw away his staff across the river Yamuná, (390) went home, and draws a sheet over himself from head to foot.

Up rose the lady Sonmatí and said, 'Hear, O Damsel Hemiyá. His Highness went to play tip-cat; (395) half an hour more than a watch of the day has passed. He will get ill** if he does not get something to eat.' Hemiyá went to where the prince lay with his sheet drawn over him from head to foot. Up rose the Damsel Hemiyá and said (400) 'Your Highness, it is time to wash your teeth,†† to bathe in the Ganges, to worship the goddess, and to eat food.' Up rose prince Bijai and said, '(405) Hemiyá, then will I brush my teeth, when you tell me the name of my father and of my brother.' Up rose the Damsel Hemiyá and said 'Prince, this thing your Highness's sister-in-law knows.' (410) Away went the damsel Hemiyá to where was the Lady Sonmatí, and saw her

* ऋन्ह = ऋन्ध, 'hidden'.

† सनमतवा is long form of सनमत.

‡ सेकर for तेकर is an unusual form in Bhojpúrí. It is more common in Magahí. In Bhojpúrí it has only been noted south of the Ganges.

§ डँड़िया is long form of डाँड़ी, 'the bar of a scale'.

‖ Cf. note to verse 245.

¶ बँधैले is potential passive.

** खराद is the disease resulting from not eating at the proper time.

†† दतुअन is a tooth-brush, राम दतुअन is the ceremony of brushing the teeth.

in front of her. Up rose the Lady Sonmatí and said, 'Hemiyá. How is his Highness?' (415) Up rose the Damsel Hemiyá and said, 'O Lady, how can I say how his Highness is? The prince is speaking evil words. He is asking the name of his father and of his brother.' (420) Sonmatí went taking with her a vessel of water, and a tooth-brush. She took with her cow's milk and a bundle* of Magahí betel, (425) and went to the *Lál Darwájá*, where prince Bijai was sleeping, and stood by his head. 'Arise, prince, brush thy teeth, and bathe in the Ganges. (430) Drink a vessel of cow's milk and chew† a bundle of Magahí betel. Give up the anger in your heart. (435) You are the support of my life; for you my whole day passes. For your sake have I been patient.' Up rose prince Bijai and said, 'Sister, I will eat food and drink water,‡ when you tell me my father's name. What happened to my brother?' (440) 'When you were yet in your mother's womb,§ your father died. The day that you were born, was the day on which my husband (your brother) took me to his house‖ and on the same day your brother (my husband) died.' (445) When he heard this he said, 'If you were not my sister-in-law, I would strike even you on the head and kill you. Sister-in-law, my father went to my wedding, and now he is suffering in prison. (450) Sister-in-law, my brother went to my wedding, and now he is suffering in prison. My wife's father's name is Báwan Súbá, and it is he who has put them in prison.'

When Sonmatí heard these words (455) she began to weep bitterly, and went into the female apartments, where her friends and companions were. 'Hear my friends and companions, the prince went to play tip-cat. (460) Who has wakened up the wasp?¶ Friends, the prince remembers his father and his brother. He is going into his enemy's country. Tell me what I am to do to prevent it. How shall I cause the prince to forget?** (465) Up rose her friends and companions and said, 'Friend, put anklets on your legs, and on every hair plait a pearl. Take unto yourself the sixteen charms of a woman; make and spread a bed, (470) and go and catch the prince's arm.' She took unto herself all the charms, and went into the *Lál Darwájá*, where prince Bijaiyá was sleeping. She caught the prince by the arm, (475) 'Prince, come with

* दोली is a bundle of 200 leaves of betel for chewing.

† The √ कचर *lit.* 'champ', from the noise (कच कच) made by the teeth. The same root is also used for cutting grass with a sickle for a like reason.

‡ *Lit.* I will eat from food to water.

§ ओतनवाँ is long form of ओतन, 'womb'.

‖ The ceremony of *Gauná* referred to in verse 179.

¶ *i. e.* his fiery nature.

** √ भार = Hindí √ भूल.

me to the female apartments. Of what is written in our fate there is no eraser. For you and me it is written that we shall sleep pleasantly together.' Prince Bijai went as she told him, and Sonmatí (laid herself down beside him) and slept. (480) But, behold, between them the prince lays a sword. Up rose the lady Sonmatí and said, 'the red of dawn has begun, and morn is breaking. Prince, turn and look upon my face.' When the prince heard these words, (485) he got up and stood, 'Up to to-day you have been my sister-in-law,* but from to-day you are to me as my mother.'

Sonmatí went out followed by the prince, (490) who said, 'Sister-in-law, where is the colt Hichchhal?' Up rose the Lady Sonmatí and said, 'the horse was in its stable.' (495) Against the door of this stable she had placed a millstone. There the prince called to mind the goddess Durgá. 'O Durgá be a help to my arm.' He went and upset the millstone, and his eyes fell upon the horse. (500) The colt Hichchhal began to weep, and up he spake, full of anger, and mad. 'Prince, why have you shown me your face? Twelve years† have passed by, (505) and you have put me also into the stable.' Again he said, 'Prince thus hast thou done in thine own castle.' Up rose Prince Bijai and said, 'Hichchhal, I did not know your condition. (510) To-day have I heard it for the first time, and I came to search for you.' Then the prince took him out of the stable to his father's tank, and there he rubbed him down and made him ready. (515) He then went to his own doorway, tied up the horse under a *nim* tree, and gave him clarified butter and sweet cakes. He increased its allowance of grain, and then the horse became ready. (520) The prince went to the female apartments, where was his sister-in-law Sonmatí. 'Sister, give me a horse's saddle.' She gave him a saddle, and he brought it to the horse (525) and girthed it on. He leaped upon its back and rode upon it. Up rose his sister-in-law Sonmatí and said, 'My prince, you are going to the enemy's land, go thou first to the platform of the goddess's altar, (530) and kneel‡ before her.' He went to the platform, and prayed, saying, 'Goddess, I am going to the enemy's land, remain a help over me.' (535) Up rose the sister-in-law Sonmatí and said, 'My prince, keep the goddess Durgá in your heart. She further said, 'You are going into the enemy's land, how shall I know your welfare?' (540) Up rose prince Bijai and said 'Get a green sandal tree cut, and have it planted in your courtyard.

* According to native custom, it is allowable for a woman to joke with her husband's younger brother. This sometimes leads to intrigues, which, when between these, are looked upon as almost venial, especially when the woman is a widow.

† See note to verse 245.

‡ Regarding √ घाल, see note to verse 215.

As long as that sandal tree remains fresh, so long know that the prince is living, (545) when the sandal tree withers know that the prince has been killed in battle.'* Up rose sister-in-law Sonmatí and said as she wept, 'My prince, from to-day you have begun to forget me.'

(550) Away went Prince Bijai, and Hichchhal flew away into the sky. He went and went till he arrived at the fortress in the mountains. The prince halted at Báwan's tank. (555) Up rose the goddess Durgá and said, 'My Prince, thou art come into the enemy's land. Here must you show subtilty. I am going to Báwan's castle, and will show a dream to Chalhki.'† (560) Away went the goddess to Báwan's castle, to where Chalhkí, the barber's wife was sleeping. The goddess took the form of a cat, 'Hear, O Chalhkí, the barber's wife, Tilkí's‡ father has had a tank dug, (565) and her brother has built the steps to it. Great skill§ has been shown in building it. O Chalhki, Tilkí has never seen it, O Chalhkí, shame upon her life'. When Debí had shown this dream, (570) she returned to prince Bijai.

O my gentlemen, now hear what happened to Chalhkí. She went to where was the princess Tilkí, and said, (575) 'Hear, O Princess, I was asleep in my room,‖ and at night I saw a wondrous dream. O Princess, your father has dug a tank, and your brother the four flights of steps to it, (580) and you have never seen it. Come and bathe in it.' When Tilkí heard these words, she went to her mother, and her gaze fell upon her. (585) 'O daughter, have you abused or quarrelled with any one, that to-day you are come to me?' 'O mother, I have neither abused nor quarrelled with any one, but my father has dug a tank, a tank of great symmetry. (590) Mother, I would go and bathe in it. Mother, grant me permission to go. For this reason am I come.' Up rose Queen Mainá and said, 'O daughter, hear my words. (595) In the courtyard will I have a tank dug. In the courtyard will I have four flights of steps built. In the courtyard bathe thou, and go back to thy apartments. Daughter, to the tank (you mention) come merchants, and you will become enamoured of them. (600) You will get your father's name laughed at. If your father or brother hear of it, they will kill me, and fill my skin with chaff.' On hearing this Tilkí (understood that) the queen had not given her leave, (605) and went away to her

* √ जुझ, 'be killed in battle'.

† The maidservant of queen Mainá.

‡ Bijai's wife, the daughter of Báwan Súbá.

§ करिगरिया is long form of करिगरी.

‖ चित सरिया is long form of चित सारी which is said to be the same as चित्र सारी, 'a little painted room,' but the meaning of the word is very doubtful.

own palace, where she lay down, and tightly fastened the doors. Morning and evening passed away, (610) and thither came Chalhkí the barber's wife, and sees the state in which Tilkí is. She went to the queen, 'Hear, queen Mainá, Tilkí has passed a morning and an evening (shut up in her room), (615) now, give her leave to go.' The queen gave leave for two half-hours. Up rose queen Mainá and said, 'Chalhkí, go and bathe and return by night.' Away went Chalhkí the barber's wife (620) 'Hear, princess, open your tightly shut doors. I have got you leave for two half-hours.' The princess instantly opened the tightly shut doors, and collected five or ten of her friends and companions. (625) On her legs she placed anklets, and on her arms, armlets. On every hair she plaited a pearl, and adorned herself with the sixteen graces. A garment of the south she wore on her body, (630) and a velvet bodice. The very strings of her bodice were priceless. On her forehead she stuck a silver spot, and in her eyes she placed collyrium. (She was as beautiful as) the moon of the second day of the lunar fortnight, when it rises. (635) She looked at herself in a mirror, and struck her breast a heavy blow. 'O God, why did you give me so much beauty, when my husband is so pitiless. Shame upon my life!' (640) All her friends and companions were ready and she stepped out of the first door. On her left side a crow cawed, and she drew back the foot which she had put forward;* saying, 'Hear, O crow with lucky marks, (645) I will give you a dish of rice and milk,† if you will show me the path of my husband.' As she stepped out of the second door, the silver star upon her forehead fell to the ground. Up rose the princess Tilkí and said, (650) 'Hear, O my friends and companions, twelve years have passed (since my marriage) and never has my silver star sprung up (and fallen to the ground). Consider now all about this.' 'O Princess, what can we consider about this?' (655) She passed the third door, and the strings of her bodice burst. 'O friends, why burst the strings of my bodice? Consider now all about this.' 'O Princess, your husband is come to the tank, (660) and for this reason do the strings of your bodice burst.' She stepped through the fourth door, and lo the end of her sheet which was gathered and tied up in front slipped open. 'O friends, consider now all about this.' 'Princess, you are thinking of him to whom you are married, (665) hence has the end of your sheet slipped open.' Up

* चँगवाँ is long form of चाग, 'front'.

† These lines are constantly appearing in various songs. A crow is supposed to be able to tell the whereabouts of any person, because it is a great traveller, and because its caw is said to be ठाँय, ठाँय, 'place, place,' and hence it knows every place.

rose Princess Tilkí, and said, 'Hear, O friends and companions. You are bantering me. A falcon has carried off my husband. (670) He has probably married somebody else. If he were here now, he would have come to take me off to his own house.'* She stepped over the fifth doorway, and passed through the sixth (675) and the seventh. Behold, a flag is visible† at the tank. Up rose Chalhkí the barber's wife and spoke to the Princess. (Now Chalhkí was a great favourite with her.) And the friends and relations went on.

(680) In the meantime the crow flew to where the Prince was, and cawed over his head. Up rose Prince Bijai and said, 'Hear you base-born crow. Why, base-born one, did you caw? (685) Up rose the goddess Durgá and said, 'Prince, the love of your life has joined you. And on that account the crow cawed.' Up came the friends and relations and ascended the high bank of the tank. (690) Up rose the goddess Durgá and said, 'Hear, Prince Bijai, the love of your life has come. Now go and block up the *zanáni ghát*.'‡ Up rose the Prince, and sat down and blocked the *ghát*. (695) Then said the friends and companions, and Tilkí, 'O Chalhkí ask him who he is; and say that these young ladies want to bathe.' Said Chalhkí the barber's wife. (700) 'O Princess, ask him yourself.' Then up rose Tilkí and said, 'Hear, O merchant by the tank, where is your house and home? For what place have you started?§ (705) 'My house is in Ghunghun, and I am come to the fortress in the mountains.' Said the friends and companions, 'Sir, be good enough to leave the *zanáni ghát*, for the young ladies want to bathe.' (710) Up rose prince Bijai and said, 'Young ladies, one watch will I consume in washing my teeth, the second watch in bathing, the third in worshipping the goddess Durgá, the fourth in eating, (715) the fifth in making myself ready, and at the sixth watch will I leave the *ghát*.' Up rose the Princess Tilkí and said, 'if Báwan Súbá hears this, he will fill your skin with chaff.' (720) When the prince heard this he said, 'How is the proud Báwan Súbá? I would like to see the bravery of the father-in-law.'‖ Then said Tilkí, 'Hear, O merchant by the tank, what is the mother, (725) of one who hath such beauty as you, like? What is your wife like, who could for the sake of gain send thee forth

* The ceremony of *gaund*, see note to verse 179.

† √ लोक or ऐलोक, 'be visible'.

‡ The *zanáni ghát* is the flight of steps at a tank reserved for *Pardá-nishín* women. Loose or impudent fellows can easily and most effectually block it by simply sitting near it, as no respectable woman will then approach it.

§ A पाछेन is a dress or cloak worn by a man, which, when he is going on a journey, he sends out on the way before him at an auspicious time.

‖ ससुर is here used, like सार 'brother-in-law,' as an abusive term.

into the world? Shame upon their lives.' (730) Up rose Prince Bijai and said, 'What is *your* mother like, and what your husband like, that you whose body is lovely as a flower, (735) are allowed to wander alone in the forest. Shame upon their lives.' 'What is your Honour's father's name, and what your mother's? What is the name of your brother (740) and of his wife?' Up rose Prince Bijai and said, 'What is your Honour's father's name, and what your mother's?' Saith Tilkí, (745) 'My father's name is Báwan Súbá, my brother's Mánik Chand, and my mother's Mainá.' Saith Prince Bijai, 'My father's name is Gorakh Singh, (750) and my mother's Ghaghelwá. My brother's name is Randhír Chhattri, and his wife's name is Sonmatí.' Up rose Princess Tilkí, and said, 'What is the name of your wife's father, (755) and what of her brother, and mother? and what is your wife's name?' Up rose Prince Bijai and said, 'What is the name of your husband's father, (760) and what of your husband's elder brother? What is the name of that elder brother's wife, and what is the name of your husband?' Saith Tilkí, 'My husband's father's name is Gorakh Singh, (765) and my husband's elder brother's name is Randhír Chhattrí. My husband's mother's name is Gaghelwa, and that of my husband's brother's wife is Sonmatí, but I never came to know my husband's name.' Saith Prince Bijai, (770) 'My wife's father's name is Báwan Súbá, and her mother's name is Mainá, but my wife's name I never came to know.' When Tilkí heard these words she turned back her face which had been facing him,* (775) and Chalhkí rose and said, 'Hear, my brother-in-law,† you have been talking to your wife before you have taken her to your house.‡ O Prince, you must pay the customary forfeit.' The Prince gave her a gold *mohar*, (780) and then she continued, 'O Prince, in excellent manner will I prepare the marriage platform for you, and will send for a well-read paṇḍit. In excellent manner will I send you home with your wife.' Up rose Prince Bijai and said, (785) 'I have taken the thirty-six gods upon my head (in a vow) that till I shall have cut my father's chains (I will not do this).' Then said the goddess Dúrgá to him, 'Leap upon

* A woman cannot talk to her husband in public.

† A **ननदोइया** is the husband of a husband's sister (**ननद**). A woman is allowed to banter with her **ननदोइया**. Chalhkí, of course, was not really married to Tilkí's brother, but amongst women of the same village who are friends, it is customary to call each other sister or other blood-relations and when not of the same village, sister-in-law or other relationship by marriage. In verse 678 we have seen that Chalhkí and the princess were great friends, and from this it evidently appears that they did not belong to the same village. Hence they called each other sister-in-law. And as Chalhkí called Tilkí her husband's sister, she exercised the privilege of bantering Tilkí's husband.

‡ See note about *gaunā* to verse 179.

thy horse and ride away. These friends and companions (790) will make you forget your vow. Prince, look not behind or before.' When the Prince heard this (he leaped upon his horse), and when Tilkí heard it, she seized the horse's bridle, saying, (795) 'My Lord, hear my little word. Twelve years have passed, and I have thought of the vermilion of my forehead as but a dream.* To-day it has come back to me. O husband stay here but one night. (800) In my body a fire is rising, O husband, to-day put that fire out.' Up rose Prince Bijai and said, 'Hear me, O slender wife. How can I put that fire out? (805) I have placed the goddess Durgá round my neck, and, if I do as you desire, all the gods will be displeased with me. I would be killed in the open battle-field.' When Tilkí heard these words, she began to weep bitterly. (810) 'Husband, from to-day thou hast deserted me.' Said the Prince, 'Wife, be patient in your heart. This very day will I conquer in the fight, and come to your house.' When she heard this she said (815) 'Husband, I will let go the horse's bridle if to-day you will show me some of your skill,' but the prince touched the horse's flanks with his heel, and Hichchhal flew into the air.

The friends and companions returned (820) to the female apartments, to where was queen Mainá, and her eye fell upon them. 'Ye gods,' said the queen 'Hear me, Princess Tilkí. (825) I gave you leave for two half hours, where have you passed the whole night, and why is your face sad?' 'O mother, the tank was very exquisite, and I went round and round it to look at it. (830) 'Twas there that I passed the whole night. The west wind blew hard, and that is why my face is sad.' When the mother had heard this, they all went away to their own apartments.

(835) In the meanwhile, the goddess Durgá said, 'Prince, hear my words. Now is your lucky time. Your first fight will be with Mánik Chand, and your second with Báwan Súbá'. (840) So he went to the fortress of Jirhul, where flows the river Jhirjhir. He made his horse to leap into it, and behold his sword fell into the river. Prince Bijai began to lament, (845), 'Alas, I listened to no advice, but came to the prison of my own accord. My sword has fallen into the Jhirjhir, how now will I be able to show my bravery?' Lo, up rose the colt Hichchhal and said (850) 'Prince, you were born from a Chhattrí's womb. If you are distressed at so little as this, when the time for fighting with weapons comes, how will you bear it? Seven rivers of blood will issue forth. (855) Prince, harden now your heart.' Then said the colt 'Prince, hold the bridle tightly, and I will dive into the river Jhirjhir, and bring out the sword in my teeth,' (860) and, behold, Hichchhal

* Vermilion is worn only by married women.

brought out the sword, and went along to the fortress of Jirhul. Above the fortress was planted a hedge of solid bamboos,* and below was a clump of (thorny) *báburs*,† (865) and encircled by these was the fortress of Jirhul. He cut down the *báburs*,‡ and with his sword the bamboos; and then he entered within the ramparts. The prince went round it in all directions (870), but nowhere could he find an entrance to the inner fort. At last on one side he found a doorway, but the doors were tightly shut. Hichchhal gave them a violent kick,§ and the tightly shut doors burst open. (875) There there were two watchmen, and saith the goddess Durgá, 'Hear, Prince Bijai, now is your time, make a beginning‖ here.' (880) The prince killed both of these watchmen, (and cut off) their heads, and he gave his sword blood to taste. The Prince cut through the second door, and the third door was cut through and the fourth, (885) fifth and sixth. At the last were found all the shopkeepers, and Báwan Súbá's prime-minister was seated there, casting up the account of the food given to the prisoners. (890) Up rose the goddess Durgá and said, 'Kill all the shopkeepers, and the prime-minister.' So the prince hacked till he had made a clear space and then he cut through the seventh door, (895) so that the edge of the sword became blunt. The prisoners were all still in prison, and when they saw him they began to weep. 'Is this Prince Mánik Chand, (900) or King Báwan Súbá?' And they said, 'How will the King treat us?' But up rose Prince Bijai and said, 'It is not my father-in-law Báwan Súbá. (905) My name, O prisoners, is Prince Bijai. Be patient in your hearts, and I will bring back the vermilion to your (wives') foreheads.'¶ He began to cut the bonds of the prisoners. He cut and cut and made a clear space. (910) Then up he rose and said, 'Hear, O prisoners, plunder Báwan's market,' which they did, and then went to Báwan's tank. Then up rose Prince Bijai and said, (915) as he began to search for his father and his brother, 'What has become of my father Gorakh Singh, and what of my brother Randhír Chhattrí? Has Báwan Súbá had them hung?' Then up rose his father Gorakh Singh** (920) (saying) 'Is this a goblin or a demon?' Up rose Prince Bijai and said, 'It is neither a goblin nor a demon. I came here

* कठबाँस, a kind of thin, strong, male bamboo used for fences.

† बबुरनिया is long form of बबरानी or बबुरवानी, a *bábur* clump.

‡ घालि, see verse 215.

§ टपवा is long form of टाप, 'foot.'

‖ समऊत = a beginning.

¶ See note to verse 798.

** Evidently Gorakh Singh and Randhír had been imprisoned separately from the rest of the marriage procession, and had not yet been released.

to the prison of mine own accord, my name is Prince Bijai.' (925) Then said his father Gorakh Singh 'Have you come of your own accord to the prison? You who are the last grasshopper of your family. You have extinguished your family by doing so. How did you escape from Sonmatí? (930) You are the support of her life.' Then the Prince called the goddess Durgá to mind, and upset the millstone (which was laid against the door of their dungeon), and stood face to face with them. Prince Bijai began to weep, (935) 'O father has the Súbá given you all these tortures?' Up rose his father Gorakh Singh and said, and he and Randhír began to weep,—up he rose and said, 'In a former life I got written in my fate, (940) the (troubles) which I suffered in Báwan's fortress.' He said, moreover, 'Go back, Prince, to your own country.' 'O father, up to now I have been but a single life, now we have become three princes, (945) and in whatever direction I can look, I will take* possession of the fortress,' so saying he set fire to Báwan's prison and departed. He came to Báwan's tank, (950)—to the tank called Bhãwará. Just then a procession of barbers was passing by, and the Prince had them stopped and brought to him, and told them to shave all the prisoners. He then bought them clothes, (955) and prepared food for them. They all bathed, and according to the rank of each he gave them suitable apparel. Up rose Prince Bijai and said, (960) 'All you go home to your houses together, my life (*i. e.* I) will remain here alone. Do you all unite in blessing me. I myself will conquer in the fight and come home today.' Up rose the prisoners and said, (965) 'We will make a crowd behind your honour,' but the Prince said, 'No, all go to your own country.' So they all went away, only his father and his brother remained behind. (970) So up rose Prince Bijai and said, 'Hear, my colt Hichchhal, take home my father and my brother.' Away flew Hichchhal towards the sky, and arrived at the country of Ghunghun. (975) Sonmatí's gaze falls upon him, and she burns herself to ashes with anger. 'O Hichchhal, what kind of corpse have you hung to yourself? Where have you left him who is my life. Hichchhal, haste and go to the prince, (980) and be victorious in the fight and come back at once. Then will I cover your hoofs with gold'. Away went the colt Hichchhal to where the tiger (*i. e.* Bijai) is crouching and told him all that Sonmatí had said. (985) Up rose the goddess Durgá and said, 'Prince, now is your time, come to the well of Bhãwaránan.' So he (destroyed) the tank and mixed it up with dust, and took up his station by the well. (990) Thither came some of Báwan's damsels to draw water, and he began to banter with them. 'Good sir, from what country are you a traveller? If king Báwan Súbá hear of this, (995) he will kill you and fill your skin

* √घाल, see verse 215.

with chaff.' When the Prince heard these words, he smashed all their water-jars, and tore from them their ornaments, and the damsels went away from him with their clothes torn, (1000) and came to Báwan's audience-chamber. Said they, 'Hear, proud Báwan Súbá, some king has come, and cut all the fetters of your prisoners. (1005) He has plundered Báwan's market. He has fired the fortress of Jirhul. He has mixed up your tank with dust, and he has brought us to this evil plight. Has the woodworm attacked your arm, O Súba?' (1010) When Báwan heard these words he burnt himself to ashes with anger. 'Hear me, son Mánik Chand: make ready your army. Fasten the pad on Bhāwaránan the elephant, (1015) and seize the base-born one and bring him here. I will see what sort of man he is. I will make the base-born one cut grass.' So the Prince makes ready his army, the dust whereof reaches to heaven; (1020) and the trumpets sound the call to battle. Up rose the goddess Durgá and said, 'Prince, here is Mánik Chand's army.' So he made his horse to prance in the field, and stood up before (the army) in answer to the challenge. (1025) He stopped all the army, and the battle with weapons began. As the Prince attacked them, Durgá overshadowed (and protected him). He hacked and hewed till he had cleared the battlefield,* (1030), and only Prince Mánik Chand survived. His nose he cut off, and then his ears and arms, and then he tied him up with his horse's heel-ropes. (1035) Mánik Chand went off to Báwan's audience-chamber, and appeared before his eyes. Báwan became filled with rage and drunk with it. Up rose the proud Báwan Súbá and said, (1040) 'It would have been better if you had been killed in the open battle-field than that you should come home with your ears cut off. You were born from a Chhattrí's womb.' When Báwan had heard all this, he made ready his own army, (1045) and started, and arrived at the open field, and then again began the battle with weapons. The Prince hacked and hewed till he had cleared the battle-field, and only King Báwan Súbá survived. (1050) With hands humbly clasped Báwan says, 'Sir, hear my little word. I am your father-in-law. Spare my life.' But the Prince leaped and cut off his head. (1055) So he hacked and hewed, till he had cleared the battle-field and went off to Báwan's castle.

Now the Prince begins to feel boastful. 'If there had not been strength in my thighs, if there had not been valour in my arms, then (1060) what could the goddess Durgá have done.' At this the goddess Durgá became displeased, and the horse and Prince falls into a well. Behold, Tilki had mounted a high upper room and, her gaze falling

* *Lit.* 'made a clear field'.

upon the Prince, (1065) she cast magic arrows* to him. Then she and Chalkhí the barber's wife came, and pulled out the prince by the arms. They took him to the wheel of Buddhú the potter.† (1070) Up rose Princess Tilkí and said, O Buddhú, if you will bring back the vermilion to my forehead, I will give you half my kingdom.

(Here the potter is supposed to bring the prince to life.) Then Chalhkí sent for a well-read pandit, and in excellent manner did the prince take her off‡ to his house. (1075) Half her kingdom he gáve to the potter, and the other half did he now give to the Bráhman.

The prince went outside before the door of the palace, and there was a younger brother of Tilkí's known as Suruj Mall, who said, 'It is a good thing he has come out of the house. (1080) Ho there, attack him with fiery missiles.' So (the servants) fired fiery missiles at him, and Prince Bijai began to burn. Then (Tilkí) began to call to memory all the virtuous actions which she had performed in any of the three worlds. 'O my virtuous actions, unite together and be my assistance.' (1085) So she throws out magic arrows, and saved the prince. Then she took a sword in her hand, and cut off all (the enemies') heads.

She had one little brother, still at the breast, remaining. (1090) 'Him,' she said, 'I will take with me, and will thereby keep in existence the relationship of brother, for, O my husband, I will sow Báwan's castle with charcoal.'§ The prince made her ascend her litter, and started, and they halted half way on the road. (1095) (Saith the little brother) 'I will sleep in the bosom of the prince.' The prince became sleepy, and the base-born little brother had with him fifty-six knives, which he thrust into the prince's throat, and then hid himself inside the litter.

(1100) The dawn came, and the morning broke, and saith the princess, 'O Chalhkí, wake my husband.' Chalhkí went to awake him, but when she saw him, she fell fainting, and the princess Tilkí began to weep. (1105) 'On neither side have I any one now, for I deserted my father's house.'

In the meantime the sandal tree in Sonmatí's court-yard withered, and her gaze fell upon it, and she fell upon the earth. (1110) Then she ran, she ran to the goddess Durgá's altar-platform. 'O Durgá, if the lad‖ has committed a fault (spare him). I would never cut off my right hand.¶ O Durgá, if the Prince is victorious this time, (1115)

* *Lit.* Indra's arrow. A kind of magic weapon.

† The prince was evidently drowned. When a man is drowned, natives lay him on a horizontal potter's wheel, which they revolve rapidly to make him vomit.

‡ The ceremony of *gaunâ* see verse 179.

§ *I. e.* burn it to ashes.

‖ बलका is strong form of बालक, 'a boy.'

¶ *I. e.* he is your devoted helper, and like a right hand to you.

I will thatch your temple with gold'. Then Sonmatí hastened away to the Prince, and there she called to mind her former virtuous actions. She split open her finger-nail,* (1120) brought† the prince into life, and took him home. Then songs of rejoicings began to be played. So up rose the Princess Sonmatí, 'O Hemiyá, now is the lucky time for the prince,' (1125) and up rose Prince Bijai and said, 'O Hemiyá, tell my sister-in-law to bring to me the boys who gave me good advice.' So his sister-in-law did so, (1130) and the Prince ordered them to be clothed in apparel of honour, and had them all feasted on sweetmeats, and laughing and sporting the boys went away.

Then the prince began to live as a householder, (1135) and called upon the name of Rám. He held a great function in honour of the goddess Durgá, who was thus made very happy, (and said) 'O prince, may you live for years from age to age.'

* Many persons are supposed to carry ambrosia in their finger, which is capable of bringing dead persons to life. *Cf.* song of Gopí Chand, last paragraph.

† √घल्लो see verse 215.

such all pronunciation is made to yield to the necessities of the tune. Take for example the first word in these songs, कॅथिफ़ुँ; as I have heard it sung, the second syllable, थि, is pronounced and held on for as long as five or six other syllables together, so that, to judge by the singing, even कॅथीफ़ुँ would be a very inadequate representation of the pronunciation of the word. Yet the word is certainly कॅथिएँ in ordinary prose, and कॅथिएँ (or rather कॅथिफ़ुँ, see next note) is required by the metre, such as it is.

Hence, except in the case of No. IV, I have not given the name of the metre at the head of each song, but the name of the air to which it is sung. No. IV is not sung to any special air, and hence I have given the name of the metre as *Ṭhumarí*. Most of the songs are sung to the air called *Kajarí gít*, an air which is popular at the commencement of the rainy season, when the sky is covered with clouds, and which is so called for that reason, the clouds being compared to काजर or lamp-black collyrium. If it is wished to classify the songs under any known metre, it will be found easiest to class all *Kajarís* as irregular *Ṭhumarís*, but paṇḍits deny that they fall under any metrical system whatever.

V. 1. कॅथिफ़ुँ is instr. sing. (shortened from कॅथिएँ for the sake of metre) of the neuter interrogative pronoun, का, 'what.' One of the oblique forms of का is कॅथी, which regularly becomes in the instr. कॅथिएँ, or for metre कॅथिफ़ुँ. This instr. in एँ is common throughout the Bihárí dialects. In Mágadhí it is only used in the case of masc. nouns ending in a silent consonant,—thus हम बलें ले जाएब, 'I shall take away by force', where बलें is the instr. of बल 'force.' As कॅथी does not end in a silent consonant, the form कॅथिएँ could not occur in Mágadhí. In Maithilí, as in Bhojpúrí, the term एँ can be added to any noun, and (also in this like Bhojpúrí) a final long vowel is shortened before it,—or when the final vowel is आ, the vowel is elided. Hence we get in Maithilí नैनिएँ from नैनी, 'a girl': and घोड़ें from घोड़ा, 'a horse.' Similarly in Bhojpúrí we get कॅथिएँ from कॅथी, 'what (*obl.*)', and सेजिएँ (see *v.* 2 of the present song where the word is written सेजिफ़ुँ for metre) from सेजिआ, 'a bed'. The only difference in custom between Bhojpúrí and Maithilí is that the former shortens the first syllables of कॅथिएँ and सेजिए, as they are in the antepenult., and followed by a consonant, while, according to the most trustworthy authorities on Maithilí, this shortening of the antepenultimate does not occur in the instrumental.

भेलें, for भेलें, both syllables being shortened for the sake of metre. भेलें is the 3rd plur. (*or* honorific) past of the √ हो, 'become'. The form of the termination is unusual. The usual form would be भेले (singular) भेलन or (in Sáran) भेलेन (plural). If we consider भेले as a further development of भेलेन, then an intermediate form भेलें must be supposed, just as there actually exists at the present day in Mágadhí a form भेलहिन, beside

the further developed form भेलहीं, 'they became', the short vowel in the final syllable being lengthened to compensate for the weakening of the nasal. Maithilí has a still older form of भेलन or भेलेन, *viz.*, भेलन्हि. In the text the second भैलें is plural only in an honorific sense.

कॉरि, The perpendicular mark over the first syllable, and elsewhere over syllables which would naturally be pronounced long, means that for the purposes of scansion the syllable is to be considered short.

बदरवा is the long form of बादर, 'a cloud' and बलमुआ of बलमू, 'a husband,' the first syllable of the former is shortened, as falling earlier than the antepenultimate. See Hoernle's Gaudian Gram. § 25 and § 356.

V. 2. सेजिपुँ—see note on केथिपुँ above.

V. 2. निउरल is the past part. of √ निउर 'bow', 'bend'.

अँगना, is the oblique form of आँगन, 'a court yard'. Skr. अंगनः = Mágadhí Prákṛit अंगने = Bihárí आँगन; Skr. अंगनस्य = Mágadhí Prákṛit अंगनाह = Bihárí oblique अँगना. Hence nominative, आँगन, 'a courtyard', but *loc.* अँगना में, 'in a courtyard'. Occasionally, however, अँगना is incorrectly used in the sense of nominative.

रजवा is long form of राजा, 'a king'; and रोरिआ of रोरी, 'a lump'.

बहरलौं, 1st singular past, of √ बहार, 'sweep'. The singular termination in औं is rare in Bhojpúrí, though common in Mágadhí. Bhojpúrí usually adopts the plural termination ईं; thus, बहरलीं.—बहरलौं is a contraction of the still older form बहरलऊँ, which still survives in Maithilí. बहरलऊँ, is probably a compound of the past part. बहारल, and an obsolete verb अऊँ, 'I am'. अऊ no longer survives, but we have अहेऊँ, 'I am', in the Rámáyan of Tulsí Dás, and अहि, 'he is', and other forms in Maithilí.

चलावें, 3rd plur. (*i. e.* honorific) pres. conj., in sense of Indicative of √ चलाव. The usual form would be चलावन, see note on भैलें above.

V. 4. लोगवा is the long form of लोग, 'people'; भतिजवा of भतीज, 'a brother's son': ठठोलिआ of ठठोली, 'a jest, joke'. In the translation of this verse I would prefer to read 'my' instead of 'your'.

हमरा is the oblique form of हमार, just as अँगना is of आँगन.—हमार is the genitive of हम, 'I', and its oblique form is used as an optional general oblique base of the pronoun;—so also in all dialects of Bihárí.

V. 5. लोढ़ि,—this is the oblique form of an old verbal noun लोढ़ि, 'a plucking'. The direct form (लोढ़ि) is common in the Rámáyan (whether in this particular verb or not, I have not noted), and still survives in Maithilí. I have, elsewhere, gone into the question of these oblique forms very fully, and it will be sufficient to point out here that the direct form has become in Hindí and Bihárí what is called the "Root" in intensive compounds, the final र in this case being dropped. Thus मार देना, in Hindí means, 'to beat violently', *literally* 'to give a beating'. This verbal noun मार, or मारि, 'beating', has the following oblique forms.

In the Rámáyan मारे or मारे.
In Maithilí, मारे or मारब.
In Mágadhí and Bhojpúrí मार.

They are common in desiderative compounds, generally with a dative postposition, ला or के. Thus (Bhojpúrí), ऊ मारे ला चाहेला, 'he wishes for beating', *i. e.*, he wishes to beat. So also we have in Maráṭhí वाटते मला खाया ला पाहतो, 'I fancy he wants to eat me'. It will be seen that in Maráṭhí the oblique form खाया ends in या. This is also the case in Hindí, where such phrases as मारा मारी, 'a beating on a beating', are common. Here the word मारा is undoubtedly the oblique form of मारी, as I have shown elsewhere. This oblique form in या explains the desiderative and frequentative compound in Hindí, which has much puzzled grammarians. These compounds are usually stated to be formed with the past part., thus पढ़ा करना, 'to read frequently', and बोला चाहना, 'to wish to speak', where पढ़ा and बोला are called past participles. Really they are oblique forms of the verbal noun (or root), पढ़ा being the oblique form of पढ़ (पढ़ि, or पढ़ो), and बोला, the oblique form of बोल (बोलि or बोलो). Hence we get मरा चाहना (and not मुआ चाहना), 'to wish to die', because मरा, and not मुआ is the oblique form of मर (मरि or मरो), 'the act of dying'.

V. 6. का is the regular Bhojpúrí form for the neuter interrogative pronoun, 'what?'. का is used also in western Mágadhí, but in eastern Mágadhí and in Maithilí we first meet the Bangálí की.

चलावेला is the regular Bhojpúrí 3 sg. pres., see Hoernle's Gd. Gram.

हमहूँ is emphatic for हम, 'I also'.

बेटीया is a contraction of बेटियवा, the redundant form of बेटिया, which is the long form of बेटी, 'a daughter', see Gd. Gram § 356. ना in this verse, has not, I believe, any negative force. Hence, I would translate 'I too am', instead of 'Am not I too'; and omit the mark of interrogation.

V. 7, हउ हो, altered from हऊ हो for the sake of metre. हऊ is the regular feminine 2 plur. of the present tense of the verb subst. √ हव 'be'. हो added gives the force of the conjunctive mood. The termination ऊ is the peculiar mark of the 2 plur. feminine through all tenses of all verbs: compare ऐलू, लेऊ, and जैबू further on.

के is the direct sign of the genitive, and is unaffected by gender. Its oblique form is का, also unaffected by gender. These are the pure Bhojpúrí forms; those given by Hoernle (Gd. Gram., § 373) refer to the western Bhojpúrí spoken near Banáras.

तो, तोँ, तें, तूँ, or तुँ, are all forms of the 2nd pers. pronoun non-honorific.

करे, oblique verbal noun,—direct form कर (करि or करी). See लोढ़े above.

रेलू 2. plur. fem. past. of √ आ, 'come'. See हउ हा above.

V. 8. एहि is the oblique adjectival form of ई, 'this'. एहि समैआ therefore means rather 'at this time', than, 'this is the time'; समैआ is either the oblique, or the long form of समै, 'time'.

लेऊ is more usually pronounced लिहु. The √ ले 'take' takes in the pres. imperat. an optional base लिह (in Mágadhí, लीह), whence 2 imperat. form लिहु.

जैबू, contracted for जइबू, 2 plur. fut. fem. of √ जा 'go'.

सरकोरिआ, (more properly सरकोरिआ), is the long form of सरकोरी, fem. of सरकोरा, 'a parent.'

V. 9. पनिआँ, long form of पानी, 'water'.

V. 10. कारि is the usual word for 'black', in Bihárí. कजरवा is long form of काजर, 'collyrium'. दँगुरा is oblique of दगुर, 'vermilion'.

V. 12. नैना (loc. 'in the eye'), is oblique form of नैन, 'eye': and लिलरा ('on the forehead') of लिलार, 'brow'.

The translation makes the ना in the 6th verse a negative. This, however, is hardly necessary; the sentence being equally capable of being translated as a simple direct statement, instead of a negative question, expecting an affirmative reply.

No. II.

V. 1. भेजल, for भेजले, the regular 3rd sing. past of √ भेज, 'send'. See note on भैलैं above.

सँवलिआ long form feminine of साँवल, 'light brown'.

आदा, for आवऽ, 2nd plur. imperat. of √ आ, 'come'.

V. 2. गोएड़वा, long form of गोएँड़, 'the lands near a village',—a common Bihárí word.

बजावेले would be better बजावेला, see note on चलावेला, above.

V. 3. बँधैबू, in this and other similar words, the ऊ (or उ, short for metre) at the end of the word, is the sign of the 2nd plur. feminine. बँधैबू, रखैबाँ, &c. are causals, hence the diphthong in the last syllable but one.

V. 4. बगिआ is long form of बाग, 'a garden'. बगिआ is generally specialized to mean, as here, 'an orchard'.

V. 5, 6. किरैबू, &c. are almost certainly incorrect for खिरैबू, खिरबाँ, &c. The causal of √ खा 'eat', is खिआव, and not किआव, 'cause to eat'.

No. III.

V. 1. मोहर,—I doubt the correctness of the spelling of this word. It is more usually spelt मोजर.

सनेसा,—*i. e.* सनेस with final vowel lengthened for the sake of metre, is a very common Bihárí corruption of संदेस.

V. 2. पिछुअरवा is long form of पिछुआर, 'the ground behind a house'. भिकम is more usually spelt भीखम.

देऽ, 2nd imperat. plural of √ दे, 'give'. The termination ऽ for the 2nd plural is rare in Bhojpúrí; but is the usual one in Mágadhí. It also occurs in Maithilí in the termination ऽन्हि, which is simply ऽ, with the redundant plural termination अन्हि added thereto.

एकहिँ is emphatic of एक, 'one only'.

चिठौवा is contracted from चिठियवा, the redundant form of चिठिया, which is the long form of चिट्ठी, 'a letter'.

V. 3. कोथि, see note on कोथिएँ in the 1st song.

कोरा is a common adjective used with कागज, 'paper'. It means literally, 'fresh, clean', but the कागज, has the special sense of 'not written upon'. कगजवा is the long form of कागज.

मइनौआ is an unusual form. A more usual form would be मसिदाना.

V. 4. खाँचर has a common oblique form खचरा (*cf.* Song xii, 4). नैना as already pointed out is oblique, in the sense of the locative.

V. 5. आरे is oblique form of आर, 'an edge', just as लोढ़े is of लोढ़ An older form of आर is आरि or आड़ि, which still survives in Maithilí; cf. the Mth. लोढ़ि, noted above.

लिखिहो is the precative imperative.

बिचे is oblique of बीच, and ठैयाँ of ठाँइँ, 'a place'. The regular oblique of ठाँइँ would be ठाँइयाँ, but the first syllable is shortened, owing to its falling in the antepenult, and a euphonic य is inserted. Hence we get ठँइयाँ or ठैयाँ. बिचे ठैयाँ means 'in the middle place'.

बरहो, this is बारह, 'twelve', with emphatic ओ added. The आ of the first syllable is shortened as it falls in the antepenultimate.

V. 6. Cf. Vidyápati 79, 9. जेहो is a precative form.

हमरो, emphatic for हमर, 'my'.

V. 7. तोरि, is almost certainly incorrect for तोरि, the gen. fem. of तूँ, 'though'.

बिरछे, is instrumental of बिरछ.

V. 8. तोहरा, is the oblique genitive of तूँ, 'thou'. The direct genitive is तोहर, which, when agreeing with a noun in an oblique case (like बलमुआ के), takes the obl. form तोहरा.

चिन्हेलों and जानेलों are the regular Bhojpúrí 1 sing. pres. ind.

V. 9. ठिक is altered from ठीक for the sake of metre.

दुपहरिया is long form of दुपहर, 'midday'. The word is feminine, and hence takes the long form दुपहरिया, instead of दुपहरवा.

ताहि is the general oblique form of से, 'that', used as an adjective agreeing with बिचे. बिचे is for बीचे the locative of बीच, both syllables being shortened for metre.

V. 10. लिफाए, conj. participle of the ✓ लिफाव, 'extend', more usually written लफाव.

लिहलें and बचलेन, are 3 plur. past. while लिखल is 3 sing. past. The ✓ बच or बाच, 'say', is a rare one. The more usual one is बाज, common in Maithilí. In Maithilí बाजब means 'to speak', exactly like the Hindí बोलना, and its causal बजाएब means 'to call', exactly like the Hindí बुलाना.

No. IV.

In copying this song into the Devanágarí character, I was met by its extreme corruptness. Several of the verses have more words than will scan, for instance सुगवा is superfluous in v. 3. Again words are evidently missing in others, for instance two instants are missing in v. 2. This song is known in Arrah, and by the help of competent pandits I have been able to make it fairly correct. In order, however, to show what changes have been made, I have enclosed in marks of parenthesis those words or portions of words which, like सुगवा in v. 3, and ले in v. 11, are superfluous in the original. Words added to fill up the metre of the original, like रे in v. 2, and सुगवा in v. 8, are marked with an asterisk. In verse 14 a whole phrase has had to be added, which I have enclosed in square brackets. In this verse the portion in square brackets was not in the original.

In vv. 8, 10, 12, 14, I have altered मोरे to मोरा: मोरे according to all authorities is certainly incorrect as an oblique form of मोर, 'my'. It has probably been written through confusion with the Hindí मेरे. मोरे is a form of Western Bhojpúrí, but, so far as I can ascertain, it is not used in Gorakhpúr, nor anywhere where pure Bhojpúrí is spoken.

V. 1. मोरे is here an optional direct form of मोर, 'my'. Just as the genitive of घोड़ा, 'a horse', is घोड़क, or घोड़ा के with oblique घोड़ा का, so the genitive of मैं, 'I', is मोर, or मोरे with oblique मोरा.

V. 2. भदेसवा, long form of भदेस. भदेस has two meanings, so far as I am aware, 1, the country of Magadh (Gayá), and 2, Uncouth. The two meanings are closely connected according to popular opinion, but which meaning is the original, and which the derivative I do not know.

V. 3. बेर is feminine. Hence its long form is बेरिया.

V. 4. ए is contracted from एहि, the general oblique form of ई this.

V. 7. कर is probably incorrect for करों, 'I do'. पटकतीं is 1. sing. pret. conditional.

V. 9. तोहि is general oblique form of तूँ. It is really a genitive. *Of.* song V. 9.

जैबऽ is 2 plur. fut. The first person is जाएब, the 2nd plur. जइबऽ or, contracted, जैबऽ.

V. 11. उरेला is the regular 3 pres. ind. of ✓ उर (= Hindí उड़), 'fly'.

बैठेले will not scan. बैठ would be the 3 sing. pres. conj. used in the sense of the indicative, as frequently happens.

V. 13. पुबे is the oblique verbal noun governed by लगलेन: see note on खोड़े above

V. 14. कुमलतिया is long form of कुमलता.

V. 15. रोइहि is the regular 3 sing fem. pres. ind. of √ रो, 'weep'.

No. V.

The metre of this song is one instant short throughout the 2nd line, the measure of which should be 4 + 4 + 4. In Sháhábád this is corrected by lengthening the final syllable of each line.

V. 1. देखो.—The word is दे in the original, but देखो is the version current in Sháhábád, and is required by the metre. It is 2 plur. imperat. of √ दे, 'give'.

V. 2. माथे, loc. sg. of माथ, 'a head'.

लगविले is the 3rd plur. pret. of √ लगाव, 'to join'. The past participle is लगावल or लगाविल. It must be noted that usually in Bhojpúrí the past part. ends in अल, the term. इल being rare, and confined principally to the Western districts of the dialect. In Maithilí and Mágadhí, the termination इल is never used; hence the past participle in these dialects would be always लगावल (लगाओल). So also in these dialects the past participle of √ देख, 'see', is देखल, and never देखिल. It is not till we get to the extreme east where Bangálí is spoken that we find the termination इल again. So sharply is this distinction preserved, that a Tirhut man, who speaks Maithilí, would at once pronounce any person who said दखिलऊँ (instead of दखलऊँ), meaning 'I saw', to be a Bangálí from this fact alone. We may summarise the above as follows:

Bhojpúrí	has	generally	अल.
		sometimes	इल.
Maithilí, Mágadhí	have always		अल.
Bangálí has always			इल.

बरवा is long form of बार (Hindí बाल), 'hair'.

V. 4. लागीला is the regular Bhojpúrí 1 pres. ind.

लउरा is the adj. लउ (= लघु) with the pleonastic suffix रा.

सगरे is loc. sing. of सागर, 'a tank'. The first syllable is shortened as it now falls in the antepenult.: so also in the long form सगरवा.

डरा, see note to song VI, 2.

V. 5. बाझेला is the regular Bh. 3 pres. ind.

V. 7. तो is contracted for तोहि, the oblique form of तूँ, 'thou'.

V. 8. चम is evidently superfluous, and spoils the metre.

मुनरवा is a long form of मुन्दर. The regular long form would be मन्दरवा, but, as the first syllable is farther back in the word than the penultimate, it is lightened by changing the class nasal न to *anunásik*. We thus get मुँदरवा. But, as I have mentioned in my note on काँधा, just as ँध can be written न्ह, so can ँद be written न, hence we get finally मनरवा. This word is an illustration of a general rule of spelling in Bihárí, that when *anunásik* is followed by the third or fourth consonant of any class, the two together may be represented by the nasal of the class or nasal of the class aspirated respectively. Thus, we have—

(1) आँग or आङ, 'a limb', आँजू or आञू (rare) 'a tear', आँड़ or आण 'testicle', नींद, or नीन, 'sleep', नींब or नीम, 'a *nim* tree'.

(2) सींघ or सींङ्ह, 'a lion', माँझ or माञ्ह, (*rare*) 'middle', कींढ़ or कोण्ह, 'a pumpkin', काँध or कान्ह, 'Kṛishṇ', खाँभ or खाम्ह 'a pillar'.

मुन्दर is feminine, and the proper form would be मुनरिया. मुनरिया is the form in the version of the song current in Sháhábád.

जोग.—I am unable to account for the final ए in this word. It is possibly incorrect. In the Sháhábád version the word is जोग: जोग may be the old Mágadhí Prákṛit nominative, if it is really correct.

V. 9. तोहि is here in its true meaning of a genitive singular.

V. 10. दो फल नरिअर.—The Sháhábád version is दुइ फल निबुआ, 'two lemons'. It is probably the correct one, as दुइ, and not दो, is the Bhojpúrí for 'two'.

The last line will not scan. I can make nothing of it. The Sháhábád version is तूँ दबु हमरा के दाना, which is only a repetition of the latter half of v. 7.

No. VI.

V. 2. डार is the Hindí डाल. Another form of the same root is डराव met with in v. 4 of the last song.

गले is locative.

No. VII.

This song is sung to the melody called जतसारी, a name derived from जाँत, 'a handmill', and सार, 'a house', *i. e.*, 'the song of the mill'. It is a very melancholy air.

V. 1. निबिया, long form of नींब or नीम (*fem.*), (see note above on मुनरवा, in V. 8.) 'a *nim* tree', and not 'a lemon tree' as has been translated. निबुआ (*see* V. 10) is the word for a lemon. जुरि for जूरि, for sake of metre. जूरि is fem. of जूर 'cool', a common Bihárí word, (*cf.* जुड़ि रजनि, 'the cool night', Vid. 50, 3.) The Hindí word is जूड़ा.

V. 2. तरे, *loc.* of तर, 'base'.

चटकि, the old form of चटक, the direct verbal noun (root) of the verb, used in the sense of the conjunctive participle. See note on छोड़े in No. I.

V. 3. गिराइ, also the direct form of the verb. noun. This termination इ still survives in Bhojpúrí in the case of causal and other verbs whose roots end in आ, or आव.

V. 4. अरराइ, direct verb. noun of √ अररा, (Hindí अर्राना, 'to produce a continued loud sound'). In Maithilí the form is अड़रा, as in Manbodh's Haribans, 2, 52, कटला तरु जक खसु अड़राञ्, 'she fell crashing like a cut tree'.

V. 5. सलवलौं, 1 sing. past. of √ सलाव, 'mortice'. साल means 'a mortice', and सलाञ्ब, 'to join by morticing'.

V. 6. सुतिलेन, 3 plur. past. of √ सुत 'sleep'. The root vowel is shortened as its falls in the antepenult, and is followed by a consonant. The long vowel appears in the 2 plur imperat. सुतऽ in the next verse.

पाटि is translated as 'clothes'. I have not met the word in that meaning. The version of the song current in Sháhábád gives पीठ, 'back': which hardly gives a better meaning. पाटि means literally, 'any flat surface',—one of the resultant meanings is 'the side-boards of a bed': another meaning of पाटि is 'a bandage', or 'fillet'.

V. 9. The Sháhábád version gives उठवलौं in place of the second जगवलौं.

V. 10. धैलि, 3 sing. past. fem. of √ धर, 'seize', 'place'. The masc. would be धैल.

V. 11. झाड़ु 2 plur. imperat. fem. of √ झाड़, 'release', = the Hindí √ छोड़. झाड़ is the usual Bihárí form of the root, छोड़ being comparatively rare.

V. 14. The Sháhábád version has रे बुझौली instead of सुनुझौली.

No. VIII.

The metre in the first two verses is very doubtful. I have conjecturally enclosed in marks of parenthesis, words which should be omitted to make the verses scan.

V. 1. ऐंड़वा, or as it is more usually written ओंड़वा, has the same meaning as गोंड़वा. See note on this latter word above (Song II, 2).

बड़ि, fem. of बड़, 'great'. बड़ has an oblique form बड़ा with which it is often ignorantly confounded.

V. 2. गैलि 3 sing. fem. past.

V. 3. नियार is the invitation sent by the husband's family to the bride's family, to send the bride to her husband.

जोरिदरवा (long form of जोरिदार) is in the vocative case, and means 'O companion'; the man who brings the invitation being the person supposed to speak.

V. 4. जाला, 3 sing. pres. ind. of √ जा, 'go'.

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No. IX.

V. 1. कॅ इऊँ means 'who is this'. इऊँ is merely a strengthened form of ई, 'this'.

पराइ, does not equal फिराइ. It is the verbal noun (conj. participle) of √ परा, 'run away', (*cf.* Bangálí पलाइते). The √ परा is common in Bihárí: thus, in the Maithilí Haribans of Manbodh (10, 38), रन तजि नरपति चलल पराऊ, 'deserting the field of battle the king ran away'.

V. 2. अपना is oblique of अप्पन, 'own'. The latter half of this verse, and of v. 4 has four instants too many.

V. 4. बिघवा is an optional form of बघवा, the long form of बाघ, 'a tiger'. I have never met the word in the sense of 'hyæna'.

No. X.

सॅ and कॅ in the 2nd and 4th verses appears to be superfluous.

No XI.

The metre of this incantation is most irregular. It affords no assistance towards judging the correctness or otherwise of the spelling.

As usual in these doggrel incantations, in which the charmer assumes an air of superior education, it is full of Hindí forms. Examples are हैं 'they are', in the 1st verse, and the typical long के of the 2nd verse. In the Bihár dialects कॅ the sign of the direct (and not the oblique genitive) is always short.

V. 1. घर, one would have expected घरे, the locative here.

V. 5. This is Hindí. पार is almost certainly incorrect for पाए or पाँव, and the whole means 'I reverence the feet of the good (*or possibly* seven) teacher (*or* teachers).

V. 7. निहैली for निहैलि is a regular Bihárí 3 sing. fem. past of √ निहा (or √ न्हा), 'bathe'.

गरुलेँ is instr. sing. of गरुल = गरुड़.

V. 8. पहिरा is the Hindí past tense of पहिरना, 'to put on'.

निकरत = Hindi निकलता. पसारी, for पसारि, is conj. participle of √ पसार, 'stretch out', the causal of √ पसर, 'be scattered'.

Judging from the language of the above song, the charmer was probably a Muhammadan.

No. XII.

V. 1. बैसलेन, 3 plur. past of √ बैस, 'set'. बैस is the regular Bihárí root. √ बैठ is borrowed from Hindí, when used at all, as in the last song. डढ़िए is locative of डाढ़ि, 'a bough'.

V. 3. The metre of these two lines is beyond correction. जनितोँ is 1 sing. pret. conditional of √ जान, 'know'. ऐहेँ is 3 plur. future of √ आ,

contracted from चदरे॰. चचरा, is oblique of चाचर, 'a cloth'.—(*Cf.* Song II 4). डगरिचा is long form of डगर, which is feminine.

I would now draw attention to the ample evidence these songs afford of the existence of an oblique form in Bihárí nouns, different from the direct form.

At present too little is known to form any complete set of general rules, but I may recapitulate what I have stated more fully in other places.

1. The verbal noun, usually called the root, has in Bhojpúrí and Mágadhí an oblique form in ए (or Maithilí ऐ or च). Thus देख (देखि), 'the act of seeing', oblique form देखे (= Hindí देखा in desiderative compounds); चार (चारि), 'an edge', obl. चारे.

2. A certain number of nouns, pronouns and adjectives ending in र, ड़, ल, and न, have an oblique form in चा. Examples are,

दोसर, 'second',	obl.	दोसरा.
बड़, 'great',	„	बड़ा.
देखल, 'the act of seeing',	„	देखला.
चपन, 'own',	„	चपना.

This includes all the pronominal genitives, such as हमार, *obl.* हमरा: &c. A complete catalogue of the nouns of this class is not now available, but it is a very large one, and every week's study gives me new examples. Probably it will be found that every *tadbhava* noun ending as above described can have this oblique form, but it would require a more intimate knowledge of Bihárí than is at present possessed by any European to entitle any one to speak authoritatively on this point.

Another set of grammatical forms of which there are many examples in the foregoing songs, is the instrumental in एँ, and the locative in ए: attention has frequently been drawn to them in my notes.

It is not to be expected that these songs, sung as they are by the most ignorant classes should satisfy strictly all metrical laws; but the metre is generally clearly discernible, and when obscured the reason may often be found in the tendency to repetition, and to the use of long and redundant forms.

These songs were sent to the Asiatic Society written in the Roman character, and it has fallen to my lot to transliterate them back again into Deva Nágarí. I have altered as little as possible; the only changes which I have ventured to make I have noted, except where the original transcript was undoubtedly and clearly wrong. I have been assisted in my task by several paṇḍits whose native language is Bhojpúrí, and who were also acquainted with the songs themselves.

Most of the songs are current in this district (Sháhábád), with more or less variations from the text herewith printed. As an example of the variations, I here give the second song, as dictated to me in Árá (Arrah).

चिठिया लिखि लिखि भेजलि सँवरिया ।
आउ हो नंद लाल नँवरिया चढ़ि ॥ ॥ १ ॥
जब काँधा अहलन गाँव के गोड़ैया ।
धीसे धीसे बसिया बजावे हो ॥ ॥ २ ॥
कहवाँ बँधेबू हथिया से घोड़वा ।
कहवाँ टिकैबू नंद लाल हो ॥ ॥ ३ ॥
बगिया बँधैबों हथिया से घोड़वा ।
कोठवा टिकैबों नंद लाल हो ॥ ॥ ४ ॥
का रे खिऐबू हथिया से घोड़वा ।
का रे खिऐबू नंद लाल हो ॥ ॥ ५ ॥
दाना घास खिऐबों हथिया से घोड़वा ।
खोआवा खिऐबों नंद लाल हो ॥ ॥ ६ ॥

The above version appears to me to be the more distinctly, Bihárí of the two; *e. g.*, the Bihárí टिकैबू, 'you will cause to stay,' in the 3rd verse compared with the Gorakhpúrí रखैबू, which has a very Hindí air about it.

The last song given by Mr. Fraser is a specimen of the Nág song, of which there are several examples in my Maithil Chrestomathy.

In conclusion, I would express a hope that this most interesting collection of folk-songs will stimulate other gentlemen having equal opportunities with Messrs. Fraser and Fisher, to lend a hand at collecting materials for a most fascinating study. The Bihárí folk-songs are a mine almost entirely unworked, and there is hardly a line in one of them which if published now will not give valuable ore, in the shape of an explanation of some philological difficulty. But it is from comparison of various versions of the same song from various portions of the Bihárí tract that there is most hope of tangible result: and this can only be attained if other gentlemen, officials and non-officials, can be induced to collect a few of the songs current in their own immediate neighbourhood and forward them to the Society, where it is unnecessary to say that they will be valued and welcomed.

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ASIATIC SOCIETY OF BENGAL,

Part I.—HISTORY, LITERATURE, &c.

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A Classified and Detailed Catalogue of the Gold Coins of the Imperial Gupta Dynasty of Northern India, with an Introductory Essay.—*By* V. A. Smith, B. A. Dubl., B. C. S.

(With 4 Plates and a Table of Weights.)

Introductory Essay.

Section I.—Preliminary.

The imperial Gupta dynasty is known to have consisted of a lineal succession from father to son of seven sovereigns, not including Budha Gupta, a local ruler in the country between the Jamuná and the Narmadá, nor various other princes who retained a grasp on the eastern portions of the Gupta empire, after the decadence of the imperial family.

No coins are known to exist which can be referred with certainty to the founder of the dynasty, who is in the inscriptions simply named Śrí Gupta.* Ghaṭot Kacha, Chandra Gupta I, and Samudra Gupta who

* A gold coin found in Jessore was formerly attributed to Śrí Gupta, (*J. A. S. B. XXI, p. 401; Pl. XII, 10*), but this attribution cannot be maintained. The unique silver coin, belonging to Mrs. Freeling, which was at one time believed to belong to the reign of Śrí Gupta, is plainly a coin of Skanda Gupta (*Records of the Gupta Dynasty, pp. 49, 50*). General Cunningham, nevertheless, still assigns to Śrí Gupta an unpublished coin in his cabinet. In the case of this prince the word Śrí would seem to be an integral part of his name, for the past participle 'Gupta' can hardly stand alone. Śrí Gupta would therefore mean 'protected by Śrí' or Lakshmi. In the names of the succeeding princes the word 'Śrí' is used only as the customary honorific prefix, which is, in my opinion, best left untranslated. I-tsing speaks of the king who preceded his time by 500 years as 'Śrí Gupta,' not simply as 'Gupta.' (*J. R. A. S. Vol. XIII, N. S. p. 571.*)

were respectively the second, third, and fourth sovereigns of the line, appear to have coined in gold only, and gold pieces of all these princes are extant. It is probable that during their reigns, as in the time of their Indo-Scythian predecessors, the silver currency was supplied "by the abundant issues of the Greek princes."*

The fifth king, Chandra Gupta II, has left coins in gold, silver, and copper, as also has his son and successor Kumára Gupta Mahendra.

Skanda Gupta, the last of his line who enjoyed imperial power,† did not, as far as is at present known, issue any copper coinage, but specimens both of his gold and silver mintages exist in considerable numbers.

Budha Gupta's money is known in silver only; and the coins of Nára Gupta and other eastern successors of the imperial dynasty occur only in gold, though the metal is often very impure.

The design of my catalogue is limited to a description of the coins of the imperial Guptas, as above defined, but, inasmuch as earlier publications on the subject do not discriminate the local and imperial coinages, I have been compelled to notice briefly in a Supplement some of the coins of Nára Gupta and other minor kings of uncertain date and lineage. The full discussion of these later coins would require a long dissertation to itself. For various reasons I shall not attempt to discuss the silver coinages of the Gupta kings, although there is still room for a comprehensive essay on the subject.‡

The rare copper coins of Chandra Gupta II and Kumára Gupta Mahendra seem to possess comparatively little historical interest, and, except as curiosities, are certainly of less importance than the gold and silver coins. I therefore pass them by for the present, without detailed notice. It is probable, as suggested by Wilson, that the vast Indo-Scythian issues of copper coin supplied the Gupta era with nearly suffi-

* Ariana Antiqua, p. 348.

† On another occasion I may perhaps venture on a review of what is known of Gupta history and chronology, but there is reason to hope that the task may be undertaken by a more competent hand. For the present it will suffice to say that I consider the death of Skanda Gupta, or, at least, the break up of his empire, to have occurred in A. D. 318-319, and both the reign of Śrí Gupta and the Gupta era to have begun about 160-170 A. D. I altogether dissent from the view of Prof. Oldenberg and other writers who make the Gupta dynasty *begin* in A. D. 318-9; and I am equally unable to agree with Mr. Thomas in identifying the Gupta and Śaka eras.

‡ This remark must not be understood as signifying any failure to appreciate the value of Mr. Thomas' and General Cunningham's writings.

cient currency in that metal ;* and, as in modern times, a large proportion of the small change required may have consisted of cowries, and of tokens issued by private persons.

The gold coinage of the Gupta kings is, on many grounds, of exceptional interest. The great variety of type is remarkable, and suggests many problems in the history of art, religion, and nations. Though some of the types are common, others are of extreme rarity, and to be reckoned among the most desirable treasures of the Oriental numismatist. The proper attribution of several of the types is doubtful, and supplies a theme for abundant discussion, and for the exercise of numismatic acumen. The execution of many of the coins is of a comparatively high order of art, and the design is not unworthy of the execution ; while, in most of the types, both design and execution have such strongly marked national characteristics that they are far more interesting than the mere imitations of foreign work which are found in the majority of Indian coinages. Foreign ideas are clearly traceable in this series of coins, but they are, in the best types, skilfully assimilated and Hinduized.

The Hindú character of nearly all the Gupta gold coins is a plainly

* General Cunningham informs me that, so far as he knows, only one copper coin of Kumára Gupta has yet been found. It has not been published. Sir E. C. Bayley (*Num. Chron. for 1882 p. 158*) mentions the Gupta copper coins as being "among the rarest of all Indian coins," and expresses a belief that they "seldom occur except in the immediate neighbourhood of the Gupta capital, Kanauj" [*sic.*]

Copper coins, as Prof. Gardner has observed (*Catal. of Seleucid Coins, p. xxvii*), are very seldom dug up far from their place of mintage, and, therefore, if Sir E. C. Bayley's belief as to the *provenance* of the Gupta copper pieces is correct, the common opinion that Kanauj was the Gupta capital would receive some support. But, the evidence, so far as it goes, indicates that the copper coins, like those in gold, were coined further east. Prinsep describes six specimens, and of these three were from the cabinet of Mr. Tregear, who collected at Jaunpur. The other three were respectively in the Stacy, Swiney, and Prinsep collections, and it is not said that any of them came from Kanauj. I have not any further information as to the find-spots of the Gupta copper coins. Sir E. C. Bayley in the passage above quoted rather exaggerates the rarity of the copper issues of Chandra Gupta II. Ten specimens are in the British Museum, and one is in the India Office collection. The cabinet of the Asiatic Society of Bengal contains "many" similar to fig. 15 in Pl. XXX of Prinsep's Essays, one like fig. 12 of the same plate, and one of the 'vase' type as figured in J. A. S. B. XXXIV, Pl. V. figs. 20, 21. General Cunningham and Mr. Grant possess specimens, and Mr. Theobald has a large coin, a duplicate of Prinsep's fig. 11, the obverse of which presents the king shaded by an umbrella. Further specimens doubtless exist in the cabinets of other collectors. See Prinsep's Essays, Vol. I, pp. 374-375, and Pl. XXX, figs. 11-15 ; Ariana Antiqua, Pl. XVIII, fig. 15 (the same as Prinsep's fig. 14) ; and J. A. S. B. Vol. XXXIV (1868) p. 125, and Pl. V. figs. 20 and 21.

legible record of a native reaction directed by the Gupta kings against the domination of the foreign Scythian ideas.*

The numerous, and frequently well preserved, legends on the coins of the Gupta dynasty offer much interesting material for the study of the historian and palæographer.

In addition to all the above reasons which render attractive the study of the Gupta gold coinage, another is furnished by the chaotic state of the literature on the subject and the incompleteness of the existing catalogues, which loudly call for re-arrangement and revision.

The difficulty experienced by myself in studying the coins with the help of existing publications first induced me to make an attempt to summarize and systematise the known facts. The work has grown under my hands, and, imperfect as it is in many respects, I trust that the labour bestowed upon it may not have been altogether thrown away.

"No trouble," says Dr. Burnell, "is thrown away, which saves trouble to others,"† and, even if I have failed to solve any of the numerous historical and numismatic problems suggested by the study of these coins, I can scarcely have failed in smoothing the path for investigators more fully equipped with the needful learning and technical experience. I have been encouraged in my undertaking by the recently expressed opinion of General Cunningham that "the gold coins of the Guptas require to be carefully re-examined."‡

So far as my opportunities permitted I have made a careful examination of this series of coins, and now submit the results of the investigation and the opinions I have formed to the candid criticism of all competent judges in the hope that they will supplement my facts where they are incomplete, and correct my opinions where they are erroneous.

I have endeavoured to work in the spirit of the words of Saint-Hilaire :—"La Numismatique est patiente, et elle amasse les faits spéciaux qui la concernent, jusqu'à ce que l' histoire vienne plus tard en donner la véritable clef, si jamais elle le peut."§

Section II.—Types and Devices.

In Mr. Thomas' valuable catalogues|| the several types and varieties are distinguished by an arbitrary alphabetical notation, for example,

* In the N. W. P. Gazetteer for Basti (*Vol. VI, p. 718*) the rise of the Gupta dynasty is absurdly described as a triumph of Buddhism over Hinduism. Śrí Gupta *may* have been a Buddhist possibly, but certainly his successors were all Hindús.

† Quoted in Max Müller's 'India, What can it Teach Us,' p. vii.

‡ Proc. A. S. B. August 1882, p. 113.

§ Journal des Savants for 1865, p. 413.

|| J. A. S. B. XXIV, pp. 487-502; and Prinsep's Essays, Vol. I, pp. 377-387.

E, E *b*, 2 E *b*. Such a notation is confusing and gives little assistance to the memory. I have ventured on a novel nomenclature which will, it is hoped, prove appropriate and convenient.* The devices, both obverse and reverse, of the Gupta gold coins display a remarkable amount of variety in conception and execution, and thus afford ample facilities for classification. The obverse devices, when regarded with reference to the most prominent or characteristic feature in each, are readily divisible into 19 classes, of which few are common to two or more reigns. The reverse devices, when classified in a similar way, fall into but 9 classes, and are far less characteristic of the several reigns. It is evident, therefore, that the classification of types should be based, as it is in Mr. Thomas's catalogues, on the obverse devices. The main types are named and classified in my catalogue as follows, the name of each type being intended to indicate the most conspicuous, or most characteristic element in the obverse device. The definition of each type will be found in the Catalogue.

Reign.	*Type.*
I. Ghaṭot Kacha.	1. Solar Standard. (*Pl. II*; 1).
II. Chandra Gupta I.	1. King and Queen. (*Pl. II*; 2).
III. Samudra Gupta.	1. Javelin. (*Pl. II*; 3, 4, 5).
	2. Archer. (*Pl. II*; 6).
	3. Lyrist. (*Pl. II*; 7, 8).
	4. Aśwamedha. (*Pl. II*; 9).
	5. Tiger. (*Pl. II*; 10).
	6. Boy and Battle-axe. (*Pl. II*; 11, 12).
IV. Chandra Gupta II.	1. Couch. (*Pl. II*; 13).
	2. Archer. (*Pl. II*; 14: *Pl. II*; 1, 2, 3).
	3. Lancer. (*Pl. III*; 4).
	4. Horseman to Left. (*not figured*).
	5. Lion-Trampler. *Pl. III*; 5).
	6. Combatant Lion. (*Pl. III*; 6).
	7. Retreating Lion. (*Pl. III*; 7).
	8. Swordsman and Umbrella. (*Pl. III*; 8).

* The term 'archer coins' has already been used by Wilson. (*Vishṇu Pur. p. 480, note 70.*)

V.	Kumára Gupta Mahendra.	1. Swordsman. (*Pl. III*; 9). 2. Archer. (*Pl. III*; 10, 11). 3. Horseman to Right. (*Pl. III*; 12). 4. Horseman to Left. (*Pl. III*; 13). 5. Peacock. (*Pl. IV*; 1, 2). 6. Lion-Trampler. (*not figured*). 7. Combatant Lion. (*Pl. IV*; 3). 8. Two Queens. (*not figured*).
VI.	Skanda Gupta.	1. Archer. (*Pl. IV*; 4). 2. King and Queen. (*Pl. IV*; 5).
VII.	Doubtful (Chandra etc.)	1. Archer. (*Pl. IV*; 7-10).
„	„ (Prakáśáditya.)	2. Lion and Horseman. (*Pl. IV*; 11, 12).

I have not found it practicable to classify the subordinate varieties on any definite principle, and they are arranged as seemed convenient in each case.

The 9 classes of reverse devices all agree in presenting as their main element the figure of a female, associated with emblems which prove that she is intended to represent a divine personage.

These reverse devices may be classified as follows :—

	Device.	*Reign.*	*Type.*
I.	α. Standing goddess holding lotus-flower and cornucopia.	Ghaṭot Kacha.	Solar Standard.
„	β. Ditto, holding fillet and lotus-flower, or fillet only.	Chandra Gupta II.	Swordsman & Umbrella.
II.	Goddess standing on dragon, holding standard and lotus-flower.	Samudra Gupta.	Tiger.
III.	Female (? goddess) standing, with fly-whisk.	„ „	Aśwamedha.

IV.	Goddess seated on four-legged throne, holding fillet and cornucopia, or fillet and lotus-flower.	„ „	Javelin.
		„ „	Archer.
		Chandra Gupta II.	Couch.
		„ „	Archer.
V.	Goddess seated cross-legged on open lotus-flower, generally holding fillet and lotus-flower.	Chandra Gupta II.	Archer.
		Kumára Gupta Mahendra.	Swordsman.
		„ „	Archer.
		„ „	Two Queens.
		Skanda Gupta.	Archer.
		„ „	King & Queen.
		Doubtful (all)	Archer.
		„ (? Prakáśaditya.)	Lion and Horseman.
VI.	Goddess, seated on wicker stool to left;		
„ α.	holding fillet and cornucopia.	Samudra Gupta.	Lyrist.
„ β.	holding fillet and lotus, or fillet and sceptre, or lotus only.	Chandra Gupta II.	Lancer.
		„ „ „	Horseman to Left.
		Kumára Gupta Mahendra.	Horseman to Right.
„ γ.	feeding peacock and holding lotus.	„ „ „	„ „ „
		„ „ „	„ „ Left.
VII.	Goddess riding peacock.	„ „ „	Peacock.
VIII.	Goddess standing, feeding peacock.	„ „ „	Combatant Lion.

IX.	Goddess seated on back of couchant lion;		
„	*a.* holding fillet and cornucopia.	Chandra Gupta I.	King & Queen.
„	*β.* holding fillet and lotus, or fillet only, or lotus only.	Chandra Gupta II.	Lion-Trampler.
		„ „ „	Combatant Lion.
		„ „ „	Retreating „
		Kumára Gupta Mahendra.	Lion-Trampler.

Prinsep quickly perceived that the 'Kanauj series,' as he called the Gupta gold coinage, was a continuation, and, to some extent, an imitation of the Indo-Scythian mintages; and the intimate relation between the two series of coins is well exhibited in Plate XXXVI of Vol. V of the Journal of the Asiatic Society of Bengal (*Pl. XXIX of Prinsep's Essays; ed. Thomas*).

The same relation is more amply demonstrated by the series of plates in the Ariana Antiqua, and Wilson was rightly convinced (*p.* 418) that "the coins of the Gupta princes succeeded immediately to those of the Mithraic princes." The fact of such *immediate* succession appears to my mind indisputable, and is in itself fatal to the theories of those authors who seek to date the imperial Gupta dynasty in the fourth and fifth centuries A. D. I am convinced that to a certain extent the Indo-Scythian and the Gupta gold coinages were actually contemporary.

The standing king, engaged in sacrificing at a small altar, who appears on the obverse of the coins of Ghaṭot Kacha, is almost an exact copy of the corresponding figure on many coins of Kanerki and other Indo-Scythian princes.

The altar appears again in the Javelin coins of Samudra Gupta, in the *β* variety of the Archer type of the same prince, and in the Swordsman and Umbrella type, which I attribute to Chandra Gupta II; and it is seen for the last time in the unique Swordsman coin of Kumára Gupta. The supposition has been hazarded that the object referred to is a vessel containing the sacred *Tulsí* plant (*Ocymum sanctum*), and not an altar, but comparison with the Indo-Scythian coins proves certainly that it is the latter. Moreover, in at least one specimen in the British Museum collection, the grains of incense falling on the fire-altar are plainly indicated.

The coins of Ghaṭot Kacha possess no distinctive Hindú characteristics. The king, who sacrifices at a fire-altar, grasps a peculiar rose-headed standard, which seems obviously intended to symbolize the rayed sun. The Sun and Fire are in mythology almost convertible terms, and I think it may fairly be assumed on the evidence of the coins, that Ghaṭot Kacha (though he may have been a Hindú) was a worshipper of the solar fire, as his Indo-Scythian predecessors undoubtedly were. I am also disposed to believe that in most of the types of the Gupta gold coins the figure of the king on the obverse is intended to represent him idealized as a god, and that in the case of Ghaṭot Kacha, he is represented in the character of the solar god, shedding beneficent influences upon his subjects.

The standing goddess on the reverse bears a lotus-flower and cornucopia. The lotus-flower is an emblem very commonly used in Hindú mythology, but is especially appropriate to the Sun* and to S'rí or Lakshmí, the goddess of good fortune.† The Sun (Súrya) may himself be regarded as a form or manifestation of Vishṇu the Preserver, the lord of Lakshmí. The cornucopia undoubtedly indicates Western influence, but whether the design was borrowed directly from Greek, or Roman, or Syrian coins, it is not easy to decide. Cornucopiæ occur on the coins of the Seleucid dynasty of Syria‡, but it is perhaps most probable that the device was borrowed directly from Roman *aurei*. In the Gupta series the cornucopia appears for the last time in the rare coins forming Class I of the Archer type of Chandra Gupta II, which were probably struck early in his reign. It is *perhaps* possible that a close comparison between the forms of the Roman and the Gupta cornucopia might help in settling the great question of the Gupta dates.§ According to the chronology which I adopt, the last appearance of the cornucopia on the Gupta coins is to be dated about 240 A. D. I regard the standing goddess on the reverse of the coins of Ghaṭot Kacha as the equivalent of the Greek and Seleucid τύχη, and of the Roman Fortuna, and believe her to be a copy, in part, of the Fortuna Augusti and similar figures on Roman coins, and, in part, of the elemental goddesses on the reverse of the Indo-Scythian coins. If she must be given a Hindú name, I have no doubt that she must be named S'rí or Lakshmí, the consort of Vishṇu the Preserver.

* "The Indian mythology connected the lotus in all manner of forms with the sun." Thomas in Num. Chron. for 1880, p. 26 *note*. *Cf.* Burgess Arch. Rep. for W. India for 1874-5, p. 216 and Pl. LXV.

† Birdwood, Industrial Arts of India, Vol. I, p. 58.

‡ Gardner's Catalogue of Seleucid Coins, p. 46, Pl. XIV. Prof. Gardner informs me that Seleucid coins have been found in India.

§ See Thomas, Early Faith of Aśoka, in J. R. A. S. Vol. IX, N. S. pp. 212-217.

Certainly she cannot be intended for Párvatí.* I believe that she also may be regarded as representing the consort of the idealized king on the obverse, for it is a commonplace of Indian panegyric to represent Lakshmí as the king's consort.†

The standing goddess, holding fillet and lotus-flower, or fillet only, who appears on the reverse of the Swordsman and Umbrella coins of Chandra Gupta II with the legend 'Vikramáditya', is, perhaps, as suggested by Wilson, primarily intended to represent Victory, who so frequently appears on the Graeco-Bactrian coins;‡ but she may be only a slightly varied representation of Lakshmí, and it is also possible that, at the time the coins were struck, her effigy connoted equally the ideas of Victory and of Lakshmí or Good Fortune. Different symbolic interpretations are not necessarily mutually exclusive.

I have followed Mr. Thomas in calling the object in the right hand of this personification a fillet, and, if the figure is intended for Victory, no doubt the nomenclature is correct. But, as we shall see, a similar object constantly recurs in the hand of the female deities whose effigies are displayed on the Gupta coins, and in many cases I believe it would be more proper to follow Prinsep *(Vol. I. p. 230)* in calling it a *páśa* or noose.§ For convenience I shall use throughout the term 'fillet,' but it should be interpreted with regard to the qualification now stated.

The goddess standing on what looks like a dragon or marine monster (*makara* or *jalampa*) who is shown on the unique Tiger coin of Samudra Gupta does not appear to be intended for Lakshmí. In my remarks on that coin in the catalogue I have ventured to suggest two alternative interpretations of the symbolism.

The Aśwamedha coins of Samudra Gupta were undoubtedly struck to commemorate the performance of the sacrifice of the horse, with the ceremonies which expressed the performer's claim to be the supreme power in India. These pieces agree in weight with the ordinary coins of the period, but in other respects rather resemble medals, and the conjecture is allowable that they were issued as a special type of coin for

* Mr. Thomas, however, describes her as "a rather elegant standing figure of Párvatí, with the exotic cornucopia." (*Epoch of the Guptas, p. 23, from J. R. A. S. (N. S.) 1881.* The same learned writer thinks that the solar standard of Ghaṭot Kacha may signify a claim to solar descent.

† *E. g.* Aphsar inscription of later Guptas, *l. l.* 8, 16, seqq. (*J. A. S. B. XXXV, Pt. I, pp.* 232, 234), and inscription from Nepál (*Indian Ant. for* 1880, p. 165).

‡ Ar. Ant., p. 418.

§ Kittoe also uses the term 'noose' in his description of the Bharsar hoard, (*J. A. S. B. XXI*, pp. 390-400).

distribution among the Bráhmans engaged in the ritual of the sacrifice.* I cannot guess at the exact meaning of the figure of the female with the flywhisk on the reverse, but she is certainly intended for some sacred personage. Considering the undisputed solar character of Ghaṭot Kacha's coinage it may not be irrelevant to allude to the connection which existed between the Aśwamedha ceremony and Solar worship.† It is quite possible that Samudra Gupta, though a good Hindú, may have been, as many Hindús still are, specially devoted to the worship of the sun.

The legends of the King and Queen coins of Chandra Gupta I leave no doubt that the effigies on the obverse are primarily intended for the sovereign and his consort, for we know from the lapidary inscriptions that the name of the latter was Kumárí Deví, and that she belonged to the Lichchhavi family. The king is figured leaning on a spear, and this device may be intended secondarily to symbolize Kumára Deva, the god of war, and husband of the goddess Kumárí Devi. The reverse goddess seated on a couchant lion is probably Dúrgá, another form of Kumárí Devi, but the cornucopia in her left arm indicates that the deity is presented under her beneficent, as well as her terrific aspect.

The device of the king and queen standing facing each other reappears in the coinage of Skanda Gupta, but in a much modified, and thoroughly Hinduised form. It has not yet been met with in the issues of any of the intermediate reigns. The unique coin of Kumára Gupta lately discovered by Mr. H. R. Carnac (*Proc. A. S. B. Nov.* 1883. *p.* 144), presents the king standing between two females, whom I suppose to be his queens.

The Javelin type is the commonest form of Samudra Gupta's coinage. The device of the obverse is but a slight modification of the ordinary Indo-Scythian pattern, and the throned goddess on the reverse is as obviously a copy of the figure called Αρδοκρο or Αρδοχρο on the Indo-Scythian coins of Kanerki and his successors.

Mr. Thomas argues that this throned goddess should be identified with Párvatí, the consort of Siva, for five reasons, of which the following is a summary :—

(1). She is identical in form with the Indo-Scythian Αρδοκρο or Αρδοχρο whose name is commonly interpreted as Arddh-ogro (अर्द्धोग्रो) or 'half-Siva', *i. e.*, Párvatí.

(2.) Even if it be admitted that the early Guptas had Vaishṇava

* In the northern Bilsar inscription, dated in the year 96, Kumára Gupta is eulogized as the "giver of millions of gold, performer of the Aśwamedha" &c. (*Cunn. Arch. Rep. XI.* 20.)

† Birdwood, Industrial Arts of India, I, p. 25

tendencies, the adoption from the Indo-Scythians of the reverse device in question "may well have been a mere act of 'imitation of a foreign design,' irrespective of any aim at demonstration of creed." Reverse devices locally vary, and are not of much significance, *e. g.*, the Sassanians retained the Śiva and Nandí device of Kadphises, and the Muslim Ghaznavís retained the Hindú recumbent bull on their Lahor coinage.

(3.) The female seated on a lion, who appears on the reverse of four types of the Gupta coins, is plainly Párvatí in her form of Dúrgá.

(4.) On four types the same goddess appears in the form of Kumárí Devi, associated with her sacred bird the peacock; and

(5.) Skanda, the name of the last of the imperial Guptas, is an *alias* of Kumára Deva, the god of war, son of the goddess Kumárí Devi.*

These arguments seem to me to be of little weight. The interpretation of Ardokro or Ardochro as meaning 'half Śiva' is a very forced one, and I doubt greatly if such a compound as अर्दोक्रो, or rather अर्दोग्रो could have in Sanskrit the meaning assigned to it. The name is never written Ardogro, whereas the title of Śiva which is supposed to form an element of the compound is Ugra, and I do not see how the 'g' can be converted into κ or χ, nor why the aspirate at the end of *arddha* should be lost. The supposed compound 'Arddhogra' has no analogy with the genuine compound 'Arddhanárí'; it is one thing to speak of a creature as half-female, and quite another thing to speak of Joan as half-John.† The Indo-Scythian goddess may or may not be intended to represent Párvatí, though I do not believe that she was, but I am convinced that her name does not mean 'half-Ugra,' and that such a compound never existed. The name Αρδοχρο or Αρδοκρο is probably a Scythian name, and not an Indian word at all.

If the throned figure is to be identified with any goddess of the modern Hindú pantheon, I consider that she should be identified, as suggested by Wilson, with Śrí or Lakshmí, the benign goddess of fortune, and not with the terrible Párvatí.

The supposed Vaishṇava tendencies of the early Guptas have been believed in chiefly on the testimony of the Bhitarí pillar inscription, which, if correctly interpreted by Dr. Mill, proves Chandra Gupta II and Kumára Gupta to have been Vaishṇava, and Skanda Gupta to have

* J. A. S. B., XXIV (1855) pp. 489-490.

† *Cf.* Wilson's criticisms in Ar. Ant., pp. 361-362. In the Pa-Shaka coin in the British Museum the name of the goddess is spelled ΟΡΔΟΧ[ΡΟ], a form which it is absurd to identify with 'Arddhogro.' (*This unique coin is described in Mr. Thomas's Indo-Scythian Coins with Hindí Legends, p. 11.*) General Cunningham concurs with me in giving the name of Lakshmí to the goddess, whether seated on the throne or the lotus-flower.

been Śaiva. But the translation of the Bhitarí inscription is avowedly imperfect, and, until it has been revised by a competent scholar, is of little use for historical purposes.*

The interpretation of the device of the throned goddess requires no assumption as to the sectarian preferences of the early Guptas, for the attributes of the figure are manifestly those of Lakshmí rather than of Párvatí, and I venture to affirm that but for the 'half-Śiva' interpretation of the word Ardokro, no one would ever have thought of calling the figure Párvatí. The suggestion that the figure of the Ardokro goddess was adopted by Samudra in mere imitation of a foreign design does not appear to be tenable. The coins with this reverse undoubtedly show evident traces of foreign influence, but they are far from being mechanical copies of alien designs. If Samudra Gupta's die engraver had been a mere copyist he would naturally have copied from the coins of Samudra's father and grandfather, but the reverse devices of their coins are totally different both from the Ardokro figure and from each other. Samudra himself employed four distinct reverse devices, and evidently adopted each of them deliberately.

Mr. Thomas' remaining evidence in favour of his interpretation consists in proofs of the Śaiva preferences of Kumára Gupta and Skanda Gupta. But the facts that one of these princes placed on his coins effigies of Kumárí Devi and of Durgá, and that the name of the other is a synonym of Kumára Deva, by no means prove that all female figures on the reverses of other Gupta coins are intended for forms of Párvatí. I have discussed above some of the representations of standing goddesses, none of whom can with any probability be identified with Párvatí. The peacock of Kumárí Devi, and the lion of Dúrgá are never associated with the throned Ardokro goddess. She occurs only on the Javelin and Archer coins of Samudra Gupta, and on the unique Couch coin, and the rare coins forming Class I of the Archer type of Chandra Gupta II.

An emblem, which is very characteristic of the Gupta gold coins, makes its first appearance on the obverse of Samudra's Javelin type. This is a standard bearing on the top the figure of a bird, and having a general resemblance to a Roman eagle standard.

Wilson (who is followed by General Cunningham) was inclined to interpret the bird as meaning Garuḍa, the winged vehicle of Vishṇu; but this interpretation appears to me forced and improbable. The object indicated is simply a bird, whereas the mythologists describe Garuḍa

* For the Bhitarí inscription see Prinsep's Essays, Vol. I, pp. 240, *seqq.* A revised facsimile is given in Cunningham Arch. Rep. I, pp. 97—99, and Pl. XXX. A well-edited translation is much wanted, and it is surprising that the want has remained so long unsupplied.

as a monster, half man and half bird. I prefer Mr. Thomas' former opinion that "the most natural and obvious interpretation is to look upon it as designed to represent the peacock, which appears with such frequency on the gold coins, and occupies the entire reverse field of one type of the silver coinage."*

It is, however, quite possible that the emblem is merely a copy of the Roman eagle, and the term 'bird-standard,' which involves no theory, is the safest to adopt.

In his Archer type Samudra Gupta substitutes for the javelin in the king's hand a bow, and the device thus introduced long remained the favourite obverse pattern. It is found on the coins of Chandra Gupta II, Kumára Gupta, and Skanda Gupta, and is, with few exceptions, the only design used by the rude imitators of the Gupta types, some of whose coins are noticed in the Supplement to the Catalogue.

It seems impossible at present to decide whether the Archer device was an independent invention, or was borrowed from Persia or some other foreign source, and it is equally doubtful whether it has or has not any symbolic meaning. If it has, it may be regarded as another expedient for indicating the analogy between the sun that rules the heavens, and the king who rules the earth. Chandra Gupta II issued gold coins of at least eight different types, but specially favoured the Archer type, specimens of which in large numbers have been found.

The Lyrist type of Samudra Gupta's coinage, which depicts the king as a musician playing the Indian lyre, is interesting in several respects.† The type is rare, and the specimens known are mostly in fine condition, and, with the exception of the India Office example, are broad thin coins well struck, but in singularly low relief. The dress of the king is thoroughly Hindu, but his attitude recalls that of the king on the Indo-Scythian coins classed as 'couch-loungers' by Prinsep. The reverse device is likewise in appearance completely Hindú, though apparently suggested by foreign models. It consists of a female seated sideways to the left on a wicker stool, and holding fillet and cornucopia. The attitude of the goddess, and the form of the stool on which she sits recall the device of Apollo seated on the ὄμφαλος, with its cover of the ἀγρηνὸν net, as seen on the Seleucid coins of Syria,‡ and I believe that

* J. A. S. B. XXIV, (1855) p. 494, *note*. In 'Records of the Gupta Dynasty' (1876) p. 23, Mr. Thomas adopts the Garuda interpretation.

† Line 24 of the Allahabad Pillar inscription mentions Samudra Gupta's accomplishments in singing and playing. (*Prinsep's Essays, pp. 233 seqq.*)

‡ *E. g.*, the coins of Antiochus I, figured in J. A. S. B. Vol. L. for 1881, p. 178, and Pl. XVIII, 14, 15. General Cunningham calls the seat 'cortina,' but 'omphalos' is more correct.

the resemblance is not accidental; but the closest parallel to the Gupta device is met with in an unexpected place. The goddess on the Gupta coins is almost an exact copy of Demeter as represented on a rare coin of the island of Paros, now in the British Museum, and the resemblance is so close that it is scarcely possible to doubt that in some unknown way both devices must be derived from a common source.

The cornucopia in the hand of the goddess of Samudra Gupta's coins shows that she was intended to have attributes similar to those of Demeter, and she may therefore be regarded as a novel representation of the Hindú Lakshmí, the counterpart of the Greek goddess.

The same reverse device, but with some modifications, and associated with other obverse devices, was adopted by Chandra Gupta II, and Kumára Gupta. The goddess, as she appears on the Lancer and Horseman to Left coins of Chandra Gupta II, and in varieties α and β of the Horseman to Right type of his son, would seem to be intended to symbolize nearly the same ideas as the effigy on the Lyrist pieces of Samudra. In variety γ of Kumára's Horseman to Right type, and in all the Horseman to Left coins of the same king, the goddess is represented in the act of feeding a peacock, and may, therefore, be identified as Kumárí Devi, to whom that bird is sacred.

In the gold coinage the peacock (except, perhaps, as part of the so-called 'peacock standard') appears to be peculiar to the mintages of Kumára Gupta Mahendra. The goddess on the reverse of his Combatant Lion type stands while she feeds the sacred bird. In his Peacock type the bird is still more prominent, for on the obverse the king is feeding one peacock, and on the reverse, the goddess, presumably Kumárí Devi, rides on another. There can be little doubt that in this type at all events the king is presented in the double character of the human king and the divine Kumára Deva. The peacock devices of the Gupta coinage appear to be Hinduized adaptations of the designs of the Roman coins which bear representations of the peacock associated with Juno, or with a deified lady of the imperial house. An exact prototype of the peacock with expanded tail, which is found on the silver Gupta coins, and on var. β of Kumára Gupta's gold Peacock type, may be seen on the reverse of a coin of Julia Augusta, who was a daughter of Titus and died between A. D. 81 and 90.*

A coin of Paulina (A. D. 217-238), whose life probably extended into the early years of the reign of Chandra Gupta II, exhibits the peacock in a manner strikingly similar to the device on some of the silver

* Trésor de Numismatique, Iconographie des Empereurs Romains; Pl. XXII, 11.

coins of Kumára Gupta. Another coin of Paulina's represents her in the character of Juno riding on a peacock, but the treatment of the subject differs from that used by the Gupta artists.* A standing peacock, like that on the first mentioned coin of Paulina's, appears on a coin of Mariniana, (*circa* 250 A. D.)†; and a coin of Manlia Scantilla Augusta (193 A. D.) exhibits a standing figure of Juno with sceptre in left hand, and holding in her right hand a *patera* over a peacock standing at her feet.‡

In the Boy and Battle-axe type of Samudra Gupta it is interesting to observe the reminiscence of Scythian influence in the form of the battle-axe, with which the king is armed, as representing the god of Death. The place of the usual bird on the top of the standard is taken by a crescent moon. The same crescent-tipped standard occurs on the reverse of the unique Tiger coin of the same king, on the obverse of which the king is depicted as slaying a tiger.§

The obverse device of this coin is the model of three types of Chandra Gupta II, and two of Kumára Gupta Mahendra, in which the tiger is replaced by a lion. I believe that these devices had some symbolic meaning but am not able to make it out. They may have been suggested by the Greek representations of Hercules contending with a lion.

In the Archer type of Chandra Gupta II we first meet with the reverse design No. V, which subsequently became a common conventional pattern, and was used almost exclusively by the obscure princes who rudely imitated the Gupta coinage. The device consists of the figure of a goddess facing front, seated cross-legged on an expanded lotus-flower, and holding in her left hand a lotus flower, and in her right the 'fillet' or 'noose.' The scholars who give the name Párvatí to the Ardokro goddess, of course bestow the same name on the lotus-throned divinity, but I cannot perceive in the latter device any symbolism specially suggestive of the attributes of Párvatí, whereas the symbolism used is thoroughly appropriate to express the ideas personified as Lakshmí. In justification of my views regarding the symbolism of the reverse devices of the Gupta coins I may appeal to the following description of the attributes of Lakshmí, which is based on the best authorities :—'Laksh-

* *Ibid, ibid* Pl. XLVIII, figs. 5 and 4.

† *Ibid. ibid.*, Pl. LII, 3.

‡ *Ibid, ibid.*, Pl. XLI, 1.

§ In his Records of the Gupta Dynasty (1876) p. 21, Mr. Thomas calls the ensign a 'Garuḍa standard,' but I am satisfied (after examination of the coin), that the object on the top of the standard is rightly described as a crescent in the same author's Revised Catalogue (1858).

mí, called S'rí, is Vishṇu's *śakti*. She is the goddess of good luck and plenty...She is worshipped by filling the corn-measure with wheat or other grain, and thereon placing flowers. She is represented as a lovely and benign woman, robed in yellow, holding a lotus in her hand, and seated on a lotus, or beside Vishṇu. Sometimes, as is likewise Vishṇu, she is painted all yellow, and has four arms, and she holds in one of her right hands a rosary, and the *páśa* or cord in one of her left. This cord is seen also in the hands of Varuna and S'iva, and is emblematical of the sea, which girds the earth."*

It is impossible to read this description, and not to see that it is in remarkably close accordance with the delineation both of the Ardokro goddess, and of the lotus-throned divinity. But it is quite inapplicable to Párvatí as ordinarily conceived, and the symbolism of the two coin-devices in question is equally inappropriate to the stern and terrible goddess.

I have therefore no doubt that the goddess who is seated on a throne in Samudra's coins, on a lotus flower in the coins of Chandra Gupta II and his successors, and also (in certain cases, as already specified), the divinity seated on the wicker stool, are all intended to express substantially the same conception, that of the benign and kindly Good Fortune, the bestower of happiness and plenty; the same who was named τύχη and Demeter by the Greeks, and Fortuna, Ceres, Abundantia, etc. by the Romans.

Although I have been at so much pains to distinguish between Párvatí and Lakshmí, I am aware that the two concepts sometimes coalesce, and become indistinguishable. The names and attributes of gods and goddesses, in India or elsewhere, are all nothing more than the feeble efforts of the human imagination to express by metaphor and symbol imperfectly apprehended ideas of the attributes of the unspeakable divine nature, and it is futile to attempt to draw sharp lines of demarcation between these symbolical expressions. Now one, and now another idea predominates in the symbolism, and "in any lengthened description of one Hindú deity it is amost impossible to avoid mixing up its character and attributes with those of another."† Nevertheless, the ideas personified severally as Lakshmí and Párvatí are ordinarily kept quite distinct, and nothing but confusion of thought can result if the name of Párvatí is given to a personification possessing all the attributes of Lakshmí.

* Birdwood, Industrial Arts of India, Vol. I, p. 58.

† Birdwood, Industrial Arts of India, Vol. I, p. 59. As 'Anna Púrṇá,' Párvatí is identical with Lakshmí, *ib. p. 61.*

The only Gupta kings who appear in the coin devices as mounted on horseback are Chandra Gupta II and his son Kumára Gupta Mahendra. In the later coins of Prakáśáditya the device consists of a horseman slaying a lion or dragon, but the execution of the design is very poor.

The rare Lancer coins of Chandra Gupta II are designed and executed with considerable freedom and spirit. The device may be an imitation of the very similar device on certain Macedonian coins, transmitted through intermediate channels.* The rayed turban or helmet of the king in one specimen *(Ar. Ant. XVIII,* 17*)* was perhaps suggested by the rayed head of Antiochus Epiphanes.† It is noticeable that a crescent is found in the field, either on obverse or reverse, of each of the four Lancer coins known to me.

The Horseman to Left coins of Chandra Gupta II, which are also very rare, resemble generally his Lancer coins, but the horse is turned to the left, the lance is wanting, and there is no crescent in the field.

Kumára Gupta Mahendra copied both these types of his father's coinage, but with some modifications. His Horseman to Right coins correspond with his father's Lancer coins, the lance being omitted, and his Horseman to Left coins differ from the closely similar coins belonging to his predecessor chiefly in the insertion on the reverse of the peacock, the especial emblem of Kumára Gupta.‡

The fact that Chandra and Kumára Gupta used indifferently dies in which the horseman was turned to left or right is worth noting, because a change in the direction of an obverse head on the coinage has sometimes been regarded as an indication of a change of dynasty.§

In some specimens of the curious Lion and Horseman coins of Prakáśáditya a small bird-standard is seen over the horse's head. The meaning of the character below the horse in this type, which seems to be intended for ु 'u', is not known.

I am well aware that the foregoing account of the types and devices of the Gupta gold coins is far from being complete and satisfactory, but it is the best that I can give at present, and may prove the means of stimulating further research. The attribution of the several disputed types is discussed in the Catalogue.

* For such Macedonian coins see Mionnet, Pl. LXX, 8, and Trésor de Numismatique (Rois Grecs), Pl. VIII.

† Catalogue of Seleucid Coins, Pls. XI and XII.

‡ *Cf.* "That King gave birth to a son, even as did Hara to the rider of the peacock (*scil.* Kártikeya or Kumára the god of war). Forward in battle and renowned strength, this son was named Kumára Gupta." (*Aphsar inscription of later Guptas, line 7 : in J. A. S. B. XXXV, Pt. I, p. 273*).

§ Records of the Gupta Dynasty, p. 51, with reference to Toramáṇa's coins.

Section III.

Monogrammatic Emblems.

The so-called monograms (with one doubtful exception) occur only on the reverse of the Gupta gold coins, and, when present, are generally placed over the right shoulder of the goddess.

The forms assumed by these monogrammatic emblems on the coins accessible to me are shown in Plate IV. The most common forms consist of a horizontal line, or two parallel lines, surmounted by either three or four dots or short prongs, and having a square or lozenge attached below by one corner.

Sometimes the square or lozenge is replaced by a cross, and sometimes by other devices, and occasionally the prongs or dots above the horizontal line or lines are wanting. One form (No. 25), which I know only from a drawing, departs altogether from the standard pattern. Examination of the plate will show the large variety of minor modifications in detail which occur.

What is the origin and meaning of these mysterious marks?

To this question I can give no positive and satisfactory answer, but I am not without hope that the distinct enunciation of it, and the systematic presentation of the monogrammatic emblems as they actually occur may suggest to other enquirers the correct solution of the problem.

The following statement exhibits the monograms which have come under my observation, arranged according to reigns:—

Ghaṭot Kacha.....	Nos.	1; 2; 4*a*.
Chandra Gupta I	„	3*a*; 4*b*; 5; 8*d*; 22*b*.
Samudra Gupta.....	„	3*a*; 4*c*; 6*a*; 6*b*; 8*a*; 9; 11; 19*a*; 20*a*; 20*b*; 21; 22.
Chandra Gupta II.....	„	3*a*; 3*b*; 4*c*; 7*a*; 7*b*; 8*a*; 8*b*; 10*a*; 10*b*; 10*c*; 12; 15; 16; 17*a*; 17*b*; 18; 19*a*; 19*b*; 20*a*; 21; 22; 23; 24.
Kumára Gupta Mahendra.....	„	8*a*; 8*b*; 8*c*; 10*c*; 17*c*; 17*d*; 19*b*; 20*a*; 25.
Skanda Gupta	„	3*a*; 3*b*; 4*c*?; 8*a*.
Doubtful.....	„	8*a*; 8*e*; 10*a*; 13; 14; 19*a*.

The following types have no monogram;—

Samudra Gupta	Aśwamedha.
„ „	Tiger.
Chandra Gupta II	Lancer, var. *a*

Chandra Gupta II	Horseman to Left.
" " "	Lion-Trampler, var. β.
Kumára Gupta Mahendra	Horseman to Left.
" " "	Peacock.

In the following types the monogram is sometimes present, and sometimes wanting :—

Samudra Gupta.....	Lyrist.
Chandra Gupta II	Swordsman and Umbrella.
Kumára Gupta Mahendra	Horseman to Right.

We learn from the last two lists that the monogram was not indispensable, and was frequently omitted, though more usually inserted.

The monogrammatic devices on the Græco-Bactrian coins, with which the Gupta mint-masters must have been familiar, are real monograms, combinations of letters, usually those of the Greek alphabet.

The so-called monograms on the Gupta coins, and the similar ones on the Indo-Scythian mintages, are certainly not combinations of alphabetical characters, and the application to them of the word monogram, which has become usual, is, strictly speaking, a misnomer. Kittoe preferred to designate them by the term 'emblem', but that word is inconveniently vague, and, for want of a better term, I follow the ordinary practice, and call the marks in question monograms.

Few, if any, of the forms of the Gupta monograms are exactly the same in every detail as those met with on the Indo-Scythian coins, but the general appearance of the monograms on the two series of coins is obviously identical, and many of the Gupta forms are only trivial variations of the Indo-Scythian patterns.

Consequently, whatever interpretation is given to the Gupta monograms must be sufficiently comprehensive to include the analogous and similar Indo-Scythian ones.

It appears to be established that some of the Græco-Bactrian monograms are names, more or less abbreviated, of mint-cities. General Cunningham's ingenious interpretations of a large number of these monograms cannot be implicitly accepted, but the proposition that *some* of those which "are common to a number of different princes" express the names of the mint-cities may safely be admitted. Others probably indicate the names of mint-masters or other functionaries.*

The monogrammatic emblems on the Indo-Scythian and Gupta coins look as if intended to take the place of the Græco-Bactrian monograms, and the hypothesis that they bear the same meaning or meanings

* Coins of Alexander's Successors in the East, in Num. Chron. N. S. VIII (1868), pp. 185 seqq.

naturally suggested itself. Wilson noticed that the three and four-pronged patterns of monogram were continued from the coins of the Indo-Scythian sovereigns Kadphises, and Kanerki on those of the Gupta kings, and observed that "agreeably to the purport which there seems reason to assign to these monograms, the recurrence of this emblem on all these coins should denote the place of their coinage."*

But he hesitated to adopt this theory because it appeared to him that the Indo-Scythian dominions must have lain far to the northwest of the Gupta kingdom, and he suggested the alternative hypothesis that the Gupta monograms might be merely "a proof of imitation" of the Indo-Scythian coinage, and "introduced without any definite object." Such a suggestion is, on the face of it, improbable, and it is at once disproved by a careful examination of the monograms. A mere copyist would have tried to copy the Indo-Scythian monograms as they stood, and, however he might have failed in the mechanical execution, the evidence of the attempt to copy would have been unmistakeable. But, as I have already remarked, and as any one can readily verify by comparing my plate of monograms with that in the Ariana Antiqua, the Gupta monograms, while following the Indo-Scythian in the general pattern, differ in detail, and it is incredible that the systematic variety which exists could be the result of chance caprice. Moreover, the mechanical execution of the Gupta monograms is nowise inferior to that of the Indo-Scythian. No one can study the designs of the better types of the Gupta gold coinage without seeing that the artists who cut the dies, though indebted in some respects to foreign models, yet possessed considerable originality, and knew how to assimilate and nationalize the conceptions of alien art. The hypothesis that the Gupta monograms are the work of blind and unintelligent imitators may therefore be dismissed without doubt or hesitation.

The hypothesis that the monograms indicate the mint-cities is much more plausible, but is not altogether satisfactory. The Indo-Scythian coins are found chiefly in the Panjáb and neighbouring parts of Afghánistán where Gupta coins are never found,† whereas the Gupta gold coins, as will be proved in a subsequent section, have been found for the most part in the province of Benares and the neighbouring districts. It is extremely improbable that the Panjáb Indo-Scythian and the Gupta coins should have issued, to any considerable extent, from the same mints, or should bear cognate mint-marks. Indo-Scythian coins of Kadphises and

* Ar. Ant. p. 418.

† In Arch. Rep. XIV. p. 65, General Cunningham mentions the finding of one Gupta coin among upwards of 1,000 of other kinds at Sunit near Ludiána in the Panjáb.

Kanerki are, however, found in N. E. Oudh and Benares, and it is possible that certain of the Indo-Scythian provincial mints may have been occupied by the Gupta kings when they shook off the Indo-Scythian yoke, and that the 'monograms' on the Gupta and *eastern* Indo-Scythian coins may indicate mint-cities. Unfortunately no detailed catalogue of Indo-Scythian coins has yet been published, and the statistics of their *provenance* have not yet been analysed.

The occurrence of coins together in a hoard raises a presumption that they proceeded, if not from a single mint, at least from mints not very far distant from each other. Few details as to the components of the various hoards of Gupta coins are available, but when such details are known, we find very various monograms associated in a single hoard. Thus, the 32 described coins of the Bharsar hoard exhibit monograms as follows :—*

No. 8*a*.....	1 coin of Samudra Gupta ; 6 of Chandra Gupta II ; 1 of Kumára Gupta Mahendra ; and 2 of Prakáśáditya ; total 10.
No. 3*a*.....	2 of Samudra Gupta.
No. 4*c*.....	3 of Samudra Gupta ; 6 of Skanda Gupta ; total 9.
No. 15.....	2 of Chandra Gupta II.
No. 25.....	2 of Kumára Gupta Mahendra.
No monogram	1 of Chandra Gupta II ; 6 of Kumára Gupta Mahendra ; total 7. Grand total 32.

The above considerations seem sufficient to throw doubt on the theory that the Gupta (and consequently the Indo-Scythian) monograms are the indications of mint-cities.

Nor does it seem possible that they should be the marks of mint-masters or other official persons, for the same monogram runs through several reigns. For example, the monogram No. 3*a* is found on coins of Chandra Gupta I, Samudra Gupta, Chandra Gupta II, and Skanda Gupta, and its use, therefore, continued for at least a hundred years.

If then these monograms are not the result of blind imitation, nor the devices of mint-cities, nor the marks of public functionaries, what are they ? It seems to me most probable that (though they *may* be mint-marks) they are religious emblems or symbols of some sort. The description of types in the last preceding section will have left no doubt on the reader's mind that religious symbolism and the effigies of deities appear everywhere on the Gupta gold coins, as they did on their Indo-Scythian forerunners, and it is reasonable to suppose that the same love for religious symbolism dictated the selection of the so-called monograms.

* For an account of this hoard, see *post*, Sec. V.

I cannot profess to explain the precise significance of any of the Gupta monograms, but it is possible that some Hindú scholar may be able to elucidate the subject.

Mr. Thomas has called attention to the curiously close likeness between monogram No 4*a*, and the Egyptian symbol for the bee, which was the sign royal in the Hieratic character.*

A trident which bears a resemblance to some of the Indo-Scythian and Gupta monograms occurs, detached like them, in the field of a coin of Rhescuporis II, king of the Bosphorus (A. D. 17 to 34).†

The standing figure of Victory, who appears on some coins of Azes holds in her right hand a four-pronged symbol which is identical with the upper part of so many of the Indo-Scythian and Gupta monograms.‡

These instances of resemblance between the monograms in question and other symbols may be cases of casual coincidence, but I have thought it worth while to note them on the chance of their suggesting a correct solution of the problem of the origin and meaning of the so-called monograms of the Indo-Scythian and Gupta dynasties.

Section IV.

Weights.

The authors of essays on Indian numismatics have in general contented themselves with more or less complete descriptions of the devices and legends of coins, and have paid little attention to weighments.

Numismatists in Europe of late years have become alive to the importance of dry details of the weight of coins, and have spared no pains to obtain copious lists of weights as materials for induction.

A knowledge of the weight standards of ancient coins is indispensable for the attainment of accurate notions respecting the history and development of coin types, and helps to throw light on the ill-understood commercial relations of the states of the ancient world. The scholar who devotes himself to the examination of the numismatic treasures of Europe cannot hope to do more than fill in the blank spaces of a sketch which has already been drawn in firm outlines by the hand of history. The enquirer who ventures to explore the labyrinth of Indian numismatics can expect but little help from the friendly hand of the historic muse, but is perhaps compensated for the difficulties which he encounters by the unfailing hope of discovery, and by the consciousness that he is tracing the plan of the foundations on which history should rest.

* Records of the Gupta Dynasty, p. 21, *note*.

† Trésor de Numismatique, Rois Grecs, Pl. XXV, 12.

‡ Ar. Ant. Pl. VI, figs 12 and 18.

So general has been the neglect in Indian publications of all systematic study of coin weights, that I may be pardoned if I dwell for a moment on its importance, and call to witness an expert who has studied European and Oriental numismatics with equal ardour.

"The history of the standards of weight on which Greek coins were struck did not, until quite recently, become a subject of serious study. ..... Nothing has done more of late years to give a scientific form to Greek numismatics than the great attention given to weight standards. The fact has been recognized that a coin is, after all, but a stamped piece of precious metal, and that its value was derived, when it was issued, not from the stamp, but from the metal. Distinguished scholars like Hultsch and Brandis have in consequence spent years of their lives in weighing coin after coin, recording the results, and trying thence to reach principles. The greatest of living archæologists, Professor Mommsen, has given much time to the study of the weights and developments of Greek and Roman coins, and his strength has opened a way through jungles which were before impenetrable obstacles to science."*

It cannot be expected that Anglo-Indian amateur numismatists should devote years of their lives to weighing coins, but, even with such limited opportunities as circumstances permit, they may collect a goodly mass of the necessary details, and do something to give to Indian archæology that scientific form which it frequently lacks.

The weights of all coins mentioned or described in my catalogue are there noted, so far as they could be ascertained, and the results are exhibited in the Table of Weights, which deals with 177 coins. Examination of the devices has already proved that the Gupta gold coinage immediately succeeded that of the Indo-Scythian princes, and this conclusion is confirmed by the study of the coin weights.

Few details as to the weight of the Indo-Scythian coins are available, but, according to Mr. Thomas, the coins of the Kadphises group average 122·4 grains, while those of the Kanerki series are somewhat lighter, but often weigh 122 grains. Some Indo-Scythian pieces weigh as high as 125 grains.†

The source from which the Indo-Scythians derived the supply of gold for their extensive mintages is not known with certainty, but is conjectured, and with much probability, to have been the constant stream of Roman *aurei* which in those times poured into India in exchange for her silk and other commodities.

* Types of Greek Coins by Percy Gardner, 1883, p. 62.

† Early Faith of Aśoka (*J. R. A. S. IV N. S. p. 223*). It is possible, and even very probable that the Indo-Scythian and Gupta Dynasties and coinages to a certain extent existed contemporaneously in different parts of the N. W. P. and the Panjáb.

The existence of this eastward drain of gold is fully proved by the testimony of Pliny, as well as of other witnesses. The words of Pliny are so vivid and explicit as to be worth quoting afresh. "Minimâque computatione millies centena millia sestertiûm annis omnibus India et Seres peninsulaque [*scil.* Arabia] imperio nostro adimunt. Tanta nobis deliciae et feminae constant."* Again he observes that the trade with India was worth taking some trouble to maintain. "Digna res, nullo anno imperii nostri minus H. S. quingenties exhauriente India, et merces remittente, quæ apud nos centuplicato veneant."†

The *aureus* was adopted first by Julius Cæsar as a regular element of the Roman currency, and his standard is said to have been 125·66 grains but his coins generally range between 120 and 125 grains. It would therefore appear that the Indo-Scythian gold coinage is based on that of Julius Cæsar, and not on the Macedonian stater, or Persian daric, of which the standard was 134·4 grains, or two Attic drachmae. This fact helps in some measure to settle the vexed question of the date of the Indo-Scythian kings, and consequently of their Gupta successors.

The weight of the Roman *aureus* after the death of Julius Cæsar gradually declined, and in the reign of Nero is stated to have averaged 115·39 grains.‡

The average weight of 4 coins of Ghaṭot Kacha is 114·95, and the heaviest coin weighs 118. The average weight of the *aurei* of Augustus in the British Museum is 121·26, and it would therefore at first sight appear as if the coins of Ghaṭot Kacha were based on the Roman coinage intermediate between Augustus and Nero. But a fine coin of Chandra Gupta I, son and successor of Ghaṭot Kacha, which is in the British Museum, weighs 123·8, and this fact indicates that Chandra Gupta's coinage was adapted to a standard of about 125 grains, and renders it probable, though not certain, that Ghaṭot Kacha followed the same standard.

I assign the coins of the King and Queen type alone to Chandra Gupta I, and the weight of 4 of these averages 117·57. The light weight of the majority of the coins of Ghaṭot Kacha and his son appears to be due to wear and tear.

The details for the weights of the six types of Samudra Gupta's

* Pliny, Hist. Nat. XII, 41.

† Pliny, Hist. Nat. VI, 26.

‡ The average weights 125·66 and 115·39 for Julius Cæsar and Nero respectively are those stated by Letronne, as quoted in Smith's Dict. of Antiq. and in Thomas' Early Faith of Asoka, *ut supra*. Mr. Gardner informs me that the *aurei* of Julius Cæsar average 120 to 125, and those of Nero 112 to 114. I adopt Gen. Cunningham's estimate of the weight of the daric; Mr. Heard makes it 130 grains.

coinage will be seen on reference to the table. The heaviest coin of his reign is one of the Boy and Battle-axe type, which weighs 123·4, and the next heaviest is a Lyrist coin weighing 122 grains.

The 5 specimens of the Lyrist type weighed are all in good condition, and yet exhibit a remarkable variation in weight from 111 to 122 grains, of which I cannot offer any explanation. The β variety of Samudra's Archer type is remarkable for its light weight, the highest weight being 114 grains.

The Aśwamedha coins average 116·18, and do not exceed 117·7, but all specimens weighed are more or less worn. The mean of the weights of the heaviest coins, one of each type, is 118·87, for the reign of Samudra Gupta. With the exception, perhaps, of the β variety of the Archer type, I do not believe that the weight standard was intentionally lowered during this reign.

The coins of Chandra Gupta II are somewhat heavier, but for the most part follow the same standard as those of his predecessors. The Wheel coins (Archer type, class II β) form a remarkable exception, the highest weight (two specimens) being 132·5, and the average weight of 8 coins being 129·77, which figures agree substantially with those for the reign of Skanda Gupta. It would seem as if these Wheel coins were struck on the daric or Macedonian stater standard of 134·4 grains. I can offer no explanation of this fact, but I believe that it is an indication of some important historical event. These Wheel coins of Chandra Gupta's and the coins of Skanda cannot be intended as equivalent for Roman *aurei*, for the heaviest known *aureus* is one of Pompey, weighing 128·2. It is possible that the immediate model of the coins in question was found in the issues of the Seleucid kings of Syria, which frequently weigh 130-132 grains, and are sometimes found in India.

A few coins of the Archer type, class II α (the commonest variety) and of the same type and class var. γ, exceed 125 grains, the heaviest specimen weighing 127·6, but the average for the type (excluding the Wheel variety) is about 123 grains, and I believe, therefore, that the coins were intended to follow the old Roman and Indo-Scythian standard of about 125 grains.

The mean weight for the reign, calculated as in the case of Samudra Gupta, and excluding the Wheel variety, is 121·61.

In the reign of Kumára Gupta Mahendra the weight standard was certainly to some extent raised, the mean weight for the reign, (calculated in the same manner as above) being 126·0 grains. The heaviest coin of the reign is one of the Peacock type, weighing 128·6, and very few specimens of any type weigh less than 123 grains. The standard would therefore seem to have been the ancient Lydian standard of 130

grains. Why Kumára Gupta should have reverted to this standard for his coinage is at present an unsolved problem. Skanda Gupta's coinage occurs in two types only, the Archer and the King and Queen. The heaviest Archer coin weighs 132·5, and the average weight of 9 coins of this type is 129·21. The King and Queen type is known from two specimens only, and but one of these has been weighed; its weight is 128·8. These can, therefore, be no doubt, that, as has already been observed, the coinage of Skanda Gupta conforms to the same standard as the Wheel variety of the Archer type of Chandra Gupta II.

The investigation has thus established the remarkable fact that the undisputed coins of the imperial Gupta Dynasty were struck according to at least three distinct standards of weight, of approximately 125, 130, and 134-5 grains respectively.

When we turn to the later coins included in the Supplement to my Catalogue another and more striking change in the weight standard presents itself. These coins are all, except the Prakáśáditya coins, of the Archer type, with reverse device of a goddess (Lakshmí probably) seated on a lotus-flower. The execution is rude, and the metal sometimes debased. Of the coins bearing the name of Chandra, the weights of three are known, the average being 145·66, and the highest 148. The corresponding figures for 4 coins inscribed with the name Kumára, or its first syllable, are 146·3 and 148·7. The only gold coin of Skanda Gupta Kramáditya which has been tested, weighs 141·4. The coins of Nára Gupta Báláditya average 145·66, with a maximum of 148·7, and the Lion and Horseman coins of Prakáśáditya show an average of 145·6 and a maximum of 146·2.

These figures demonstrate that all these coins were struck according to one standard, and that quite different from any of the standards adopted for the undisputed mintages of the imperial Gupta sovereigns. What was this standard? It seems to me that it was the ancient Hindu weight and coin, the *suvarṇa*, or golden *Kárṣha* of 80 *ratís*.

General Cunningham finds it "for all practical purposes extremely convenient and sufficiently accurate to assume the value of the *ratí* at 1·75 English grain, which is the value that has already been adopted by Mr. Thomas on the evidence of the coins themselves." If this value for the *ratí* be accepted the weight of the *suvarṇa* must be fixed at 140 grains, and the coins now under consideration, whatever they may be, cannot be intended for *suvarṇas*.

General Cunningham observes that "no one to my knowledge has seen a *suvarṇa*," and in the sense that no one has yet discovered an ancient Hindu pre-Alexandrine coin of that denomination, the observation is accurate; but I venture to submit that the coins of Nára Gupta and

his compeers must be considered as revivals of the ancient *suvarṇa*, and that this conclusion is fully warranted by General Cunningham's own researches. He has devoted much time and labour to the task of ascertaining the value of the *raṭí*, by weighing the *raṭí* seeds (*Abrus precatorius*) and the other kinds of seeds metrically associated with the *raṭí* in the Hindu books. The mean of four values of the *raṭí* deduced from actual weighments of the seed of the *Abrus* is 1·8143. General Cunningham himself, with the most elaborate precaution, weighed "one thousand sound and tolerably even-sized seeds", with the result that the average weight was 1·823 grain, and Mr. Laidlay's weighments on his behalf gave practically the same result, 1·825.

Weighments of rice and other seeds alleged in the Hindu books to have definite numerical ratios to the weight of the *Abrus* seed gave results varying from 1·791 to 1·825, with a mean of 1·8044. By taking the mean of the two average weights above noted (1·8143 + 1·8044 ÷ 2) says General Cunningham, "we obtain 1·8093 as the true value of the actual *raṭí*."* This expression is not scientifically accurate, because a mere arithmetical average of results obtained from experiments conducted in different ways, and with various degrees of precaution, is *not* entitled to be called a *true value*.

It seems to me that if witnesses are to be weighed and not counted the nearest possible approximation to the 'true value' is to be found in the result 1·823 obtained by General Cunningham from the truly scientific experiment made by himself which he describes, confirmed as it is by the almost identical result, 1·825, obtained by Mr. Laidlay. General Cunningham, therefore, on his own showing, is not justified in assuming 1·75 grain as the value of the *raṭí*; and in 1865 he accepted the value 1·823 grain for the *raṭí*.† Mr. Thomas arrives at the seductive figure 1·75 by a different method. He shows, for instance, that the Hindu silver coin known as *puráṇa* should contain 32 *raṭís*, and that *puráṇa* pieces actually in existence weigh as high as 55 grains, and then, so far as I understand him, jumps to the conclusion that the full weight of the *puráṇa* was 56 grains. But I cannot see anything in his arguments inconsistent with

* For Gen. Cunningham's experiments and opinions see his paper 'On the Monetary System of the Greeks in Bactriána, Ariána, and India,' in Num. Chron. Vol. XIII, N. S. (1873) pp. 187-219, especially pp. 196-7. Mr. Thomas has explained his views in his essays on Ancient Indian Weights (*Num. Chron. IV, N. S. (1864) pp. 40-58 and 114-132, especially p. 132.*) These essays have been republished with additions in the International Numismata Orientalia.

† "The old Indian *paṇa* or copper coin of 145·833 grains." (*Coins of the Nine Nágas etc., in J. A. S. B. Vol. XXXIV, 1865, p. 120.*) The *paṇa* of copper corresponded in weight with the *suvarṇa* of gold.

the assumption that the full weight of the *puráṇa* was 57, or 58, or 59 grains, and must confess to remaining unconvinced by his reasoning, which seems to make insufficient allowance for loss of weight by wear. I believe General Cunningham's 1·823 grain to be the nearest possible approach to the true value of the *ratí*, but, for convenience, would adopt Mr. Laidlay's value 1·825, which only differs from the other by $\frac{1}{500}$th of a grain. The scale of Hindu gold coins and weights, will then stand as follows;—

5 *ratís* = 1 *másha* = 9·125 grains.
80 *ratís* = 16 *máshas* = 1 *suvarṇa* = 146·000 „

The silver *puráṇa* will thus be equivalent to 58·4 grains, a result apparently quite consistent with the weights of existing specimens when allowance is made for wear. These results are, I submit, much nearer to the truth than the figures 8·75 and 140 and 56 respectively, as adopted by General Cunningham in his later publications and by Mr. Thomas, and they happen to be very nearly as convenient for purposes of calculation. I would urge, however, that mere convenience of calculation does not justify any appreciable modification of the results arrived at by scientific investigation, and that our business is to get at the truth so far as possible, and to make our arithmetic conform. Tried by this test our coins obviously appear to be intended for *suvarṇas*. To make the point clear I repeat the weights:—

Suvarṇa = 80 *ratís* @ 1·825 grs. =		146·00 grains.
Av. wt. of Chandra barbarous coins	=	145·66 „
„ „ Kumára „ „	=	146·30 „
„ „ Skanda „ „	=	141·40 „
„ „ Nára „ „	=	145·66 „
„ „ Prakáśáditya „ „	=	145·60 „

It is true that some specimens weigh as much as 148·7, and that a base metal coin of the Kumára type weighs 150·3, but, considering the rude execution of these coins, and the inferiority of the metal in many instances, I do not think that this excess of weight invalidates the reference of these coins to the *suvarṇa* standard. Whether I am right or wrong on this point, the discussion at least proves that an investigation in detail of the weights of the coins of the Gupta period is not without interest, and may lead to conclusions of some importance.

It is to be regretted that the materials for the discussion are at present comparatively scanty, and I hope that collectors of Indian coins may be induced to pay more attention to the weights of their coins than has hitherto been customary.

Section V.

Find-spots.

The information concerning the localities in which the Gupta gold coins have been exhumed or otherwise obtained is not so copious as could be desired, and most coin collectors seem to take little interest in ascertaining either the spot where their specimens were found, or the details of the contents of each trove. Yet these points eminently deserve attention. Greek coins usually indicate on their face the locality of the mint where they were struck, but the Gupta and other Indian coins ordinarily have no indication of the sort, and, in the absence of trustworthy written history, the records of the find-spots of coins are almost our only clue to the position of the ancient Hindu mints.

The Guptas, and other dynasties of præ-Muhammadan India, which modern archæological research has rescued from the utter oblivion of centuries, are still for the most part the merest shadows, endowed with names certainly, but without any definite local habitation, and often as unfixed in time as in place.

The fabric, weight, style, devices, and legends of coins help us to fix the chronological position of these dynasties, whose names dance before the eyes of the student in a most perplexing maze. The recorded find-spots of coins, and detailed account of the contents of individual troves should be studied with care equal to that bestowed on the more attractive parts of numismatic science in order to throw light on the position of the old mint-cities, and on the local limits of the dominion of these long-forgotten sovereigns. Full details of the contents of hoards of coins when skilfully used, can be forced to yield to the historian many valuable hints.

These few observations will, I trust, be deemed sufficient justification for the elaboration with which I have worked out this part of my subject, so far as the meagre materials available would permit. I hope that collectors will be good enough to impart to the Society additional facts to complete the imperfect information at my command, and to correct any erroneous inferences which may be based upon insufficient premises.

Professor Wilson, with his usual caution, declined to commit himself to any definite opinion as to the seat of the dominion of the Gupta kings, or the position of their mint-cities, and contented himself with the remark that "all that can be affirmed of them (*scil.* Gupta gold coins) with any degree of certainty is that they are coins of the west and north-western provinces of Hindustán." He also pointed out that these coins are not found in the Panjáb or Afghánistán.*

* Ariana Ant. p. 417.

Prinsep treated this topic with greater explicitness, but, as will be shown presently, with less accuracy. "Kanauj," he says, "has been fixed on as the locale of the present class of gold coins, for the obvious reason that they are most frequently found in its ruins, not that any history ascribes them to this town."* In another passage he appeals again to the "frequency of his coins discovered at Kanauj" as a reason for fixing Samudra Gupta's capital at that place.† In a subsequent essay Prinsep to some extent corrects his former attribution of the majority of the coins to Kanauj, and observes, "Since my former paper on the Gupta coins of Kanauj appeared, very important acquisitions have been made to our knowledge of this before unknown dynasty, through the medium of coins and inscriptions; for both of which we are almost entirely beholden to the researches of Lieut. Cunningham and Mr. Tregear in the neighbourhood of Benares."

After discussing the passage in the Vishṇu Puráṇa, which defines the territory of the Guptas of Magadha as extending "along the Ganges to Prayága" (Allahabád), he remarks that "the sites, whence these coins have been most frequently obtained, certainly agree with this description."‡

A few pages later Prinsep states that the Gupta gold coins are "discovered in greatest quantity at Kanauj, Jaunpur, Gayá, and even occasionally in Bengal."§

Abstaining for the moment from any comment on the statements above quoted, I shall proceed to state all the facts which I have been able to ascertain respecting the find-spots of the Gupta gold coins; first enumerating the hoards known to me, and then giving statistics of individual coins, including some which formed parts of certain of the hoards mentioned.

172 so-called "gold darics" were found near Benares in the time of Warren Hastings, who sent them home to the Court of Directors, considering himself "as making the most munificent present to his masters that he might ever have it in his power to send them....The story is that they were sent to the melting pot. At all events they had disappeared when Hastings returned to England."‖ It is almost incredible that these 172 pieces should have been Persian darics. The

* Essays I, 284.

† *ibid*, 239.

‡ *ibid* pp. 365-6, Mr. Tregear collected at Jaunpur 40 miles from Benares; Lt. (now Genl.) Cunningham was then at Benares.

§ *ibid* p. 375.

‖ Genl. Cunningham on the Oxus Treasure Trove in J. A. S. B. for 1881, p. 184; and 'India, What can it Teach us,' by Max Müller, p. 8.

latter are extremely rare, only about 40, I believe, being known to exist, and the neighbourhood of Benares is a place extremely unlikely in which to find a large hoard of them. I consider it highly probable that the trove consisted of Gupta gold coins of the prevailing Archer type, which might in those days be easily confounded with the Persian τόξοται.

Another great golden treasure was found during the reign of Warren Hastings in the year 1783, at Káli Ghát, ten miles above Calcutta, on the east bank of the Húgli. The hoard comprised over 200 coins, many of which were sent home by the Governor-General and were distributed among the cabinets of the British Museum, East India Company, and other public institutions, where some, at any rate, of the specimens are still to be seen. The coins of this hoard are described by Wilson as being "of rude execution and debased metal," and it is doubtful if any of them are authentic issues of the imperial Gupta dynasty, though agreeing in general design with the Archer type of those issues. A few specimens from this hoard, which I designate by the name of Kálighát, are noticed in the Supplement to my Catalogue.*

In 1838 Mr. Tregear dug up some specimens of the Gupta gold coinage in some ruins, known as Jaichandra's Mahal, near Jaunpur. The exact number of the coins so found is not stated, but it does not appear to have been large. Most, if not all, of these coins were subsequently published by Prinsep, and are included in my Catalogue.†

The important trove, which is referred to in the Catalogue as the Bharsar hoard, was found near Benares in 1851 and is described by Major Kittoe as follows:—

"These coins, which are all gold, of different weight and quality, were of a trove of ninety in number, that is, such number were delivered into the treasury. They were found, with about 70 more, by some villagers, buried in a copper vessel, in a mound on which stands the village of Bharsar, in pargana Bharwal, and Thána Chandauli, about twelve miles from Benares, between the Ganges and Karamnása. Bharsar is the site of one of the many ancient cities, the names of which are lost.....

"Of the number [*scil* recovered] 71 were coins of Chandra Gupta, 69 being of one type of his coinage [*scil.* evidently, Archer type]. Of these, four were retained of the most perfect, and the remainder were sold by auction; they were all more or less defective, and but few of them had even a portion of the legend round the rim perfect, but the

* Marsden Num. Or., II, 726; Ariana Ant. *pp.* 416-17 and Plate XVIII, *figs.* 21 *seqq.* The barbarous coins figured by Marsden were from this hoard. (*Prinsep's Essays, I, 230.*)

† J. A. S. B. III, (1831), 619.

name [in Gupta characters in text] beneath the left arm of the figure was distinct in all of them."*

Thirty-two coins were retained and described. This hoard being the only large one concerning which details at all copious have been recorded, I think it is desirable to give an analysis of the portion preserved. The thirty-two coins retained comprised the following types and varieties :—

Samudra Gupta—Javelin type, var.	(1)	1
,, ,, ,, ,, ,,	(4)	1
,, ,, Archer ,, ,,	β, 2 and a duplicate	3
,, ,, Lyrist ,,	——— ———	1
Chandra Gupta II—Archer ,, class II,	α ; 2 and a dupl.	3
,, ,, ,, ,, ,, ,, ,,	β ; 1 and a dupl.	2
,, ,, ,, ,, ,, ,, ,,	γ ; 1 ,, ,, ,,	2
,, ,, ,, ,, ,, ,, ,,	δ ; 1 ———	1
,, ,, ,, Horseman to Left—	; ———	2
Kumara Gupta Mahendra — Archer	type, var. α ;	2
,, ,, ,, — Horseman to Right	,, var. α ; 1 and dupl.	2
,, ,, ,, — ,, ,, Left	,, ———	2
,, ,, ,, — Peacock	,, var. β ; ——	1
,, ,, ,, — Combatant Lion	,, ———	1
Skanda Gupta — Archer	,, 3 and 3 dupl.	6
Prakáśáditya — Lion and Horseman	,, ———	2
	Total...	32

The contents of the hoard seem to indicate that it was buried not very long after the close of the reign of Skanda Gupta, that is to say, (according to the chronology which I adopt), not later than about 400 A. D. ; and we thus learn that at that time the mound of Bharsar was an inhabited town. The Lyrist coin of Samudra is noted as being in fine condition, and some of the Skanda pieces were likewise well preserved ; a coin of Kumára's is described as much worn, a circumstance which renders it probable that the hoard was deposited at some considerable interval from the time of Kumára's reign. The association in a single hoard of coins belonging to so many reigns, types, and varieties is remarkable, and shows that these various issues were all current together in the province of Benares.

* Memo. by Major M. Kittoe, Archæological Enquirer, on some Ancient Gold Coins found near Benares in 1851, and submitted by the Government of India for the inspection of the members of the Asiatic Society ; with the Memo. on the same by Mr. E. C. Bayley. (*J. A. S. B. XXI, pp. 399-400, and Pl. XII, figs 1-9.* The plate was miserably executed by a native). The coins from this hoard are not included in Mr. Thomas' catalogues.

The same volume of the Journal of the Asiatic Society of Bengal which contains the description of the Bharsar treasure trove supplies a notice of some coins found at Muhammadpur, near the Arunkháli River, in the Jessore District of Lower Bengal. They are described as being "all of the Gupta kings of Kanauj [*sic.*] and comprise specimens of the silver coinage of Chandra Gupta, Kumára Gupta, and Skanda Gupta. The metal of these coins is very impure." The hoard included one gold coin weighing 85 grains, which, at that time, Bábú Rájendralál Mitra believed to be a coin of Srí Gupta, but it is evidently of a date much subsequent to Skanda Gupta.*

Mr. Thomas alludes, with tantalizing brevity, to "a batch of twenty gold coins found at Gopálpur on 'the Ghágra River, on the site of the old village fort, ten miles west of Barhal' in July 1854." Barhal is in the district of Gorakhpur. Seven of these coins "from the mints of Chandra Gupta II" were submitted to Government, and included a specimen of his Archer type, Class I, β. No particulars are recorded concerning the other constituents of the hoard.† General Cunningham informs me that a great hoard was found at Allahabad some twenty years ago consisting of about 200 of the gold Peacock coins of Kumára Gupta. General Cunningham saw a large number of specimens and obtained possession of four, two of which, namely, one of each variety, are still in his cabinet.

About seven years ago twenty or thirty Gupta gold coins were found at Jhúsi opposite Allahabad, comprising two specimens of Kumára Gupta's Archer type, Class I var. a; and eight specimens of the same king's Peacock type in both varieties.‡

Recently, thirteen gold coins of the Guptas were found near Húglí, the hoard being composed as follows:—

Samudra Gupta	— Javelin type	1
Chandra Gupta II	—Archer ,, Class II	5
Kumára Gupta Mahendra	— Archer ,, ———	3
,, ,, ,,	— Horseman to Right ,, ———	2
,, ,, ,,	— ,, ,, Left ———	1
,, ,, ,,	— Lion-Trampler ,, ———	1
	Total...	13§

* Note on Three Ancient Coins found at Muhammadpur in the Jessore District, by Babu Rájendralál Mitra (*J. A. S. B. XXI p. 401; Pl. XII, figs. 10-12*). One of these coins belongs to Sasángka (A. D. 600). *Cunningham, Arch. Rep. III, p. 138.*)

† J. A. S. B. XXIV (1855), p. 499.

‡ From information kindly communicated by Sir E. C. Bayley.

§ I am indebted to Dr. Hoernle for my knowledge of this hoard, which I designate by the name of Húglí.

Of the eight Gupta gold coins in the possession of Sir E. C. Bayley, three, as above mentioned, were found at or near Allahabad; the rest are believed to have been found either at Kanauj or Allahabad.

The gold coins of the Guptas in the cabinet of Mr. A. Grant were all obtained in Oudh, and mostly near Faizábád (Ayodhyá), except one, which was bought in Bombay. Mr. J. Hooper's specimens were also obtained in Eastern Oudh. Mr. H. Rivett-Carnac has 13 gold Gupta coins, 6 of these were obtained in the province of Benares, 2 were dug up near Allahabad, 1 was procured at Lucknow, 2 at Cawnpore, and 2 at Mathura.

Col. Tod's coins, including the four gold Guptas figured in Trans. R. A. S. Vol. I. Pl. XII, 4th series, were all obtained at Agra, Mathura, Ujjain, or Ajmir, but more precise information respecting them is wanting.

The above notes comprise all the facts which I have been able to collect respecting hoards of Gupta gold coins, and the origin of the collections in various cabinets.*

I shall now proceed to analyse the available statistics respecting the find-spots of individual coins, including some which were comprised in certain of the hoards already mentioned.

Prinsep was more careful than many other antiquarians have been to record the source from which he obtained his coins. Thirty-seven Gupta gold coins are described in his essays, and the following table of the find-spots of these coins has been compiled from his notes:—

From	Kanauj	3
„	Jaunpur	3
„	„ ? (cabinet of Tregear, who collected at Jaunpur)	11
„	Benares	1
„	„ ?	1
„	Gayá	4
„	Mirzápur	1
„	Gházípur	1
„	not stated	12
	Total...	37

In the following general statement, compiled from all the notes of place in my catalogue, the coins described by Prinsep are included.

* There is nothing to show the *provenance* of any of the coins in the India Office collection. The find-spots of a very few coins in the British Museum collection are recorded, but there is reason to doubt the accuracy of some of the notes. Mr. Theobald does not know where any of his Gupta coins were found, except that one was bought in Benares, and one in Mathurá. Information is likewise wanting concerning the *provenance* of nearly all the coins in the cabinet of the Asiatic Society of Bengal.

The coins of the Bharsar hoard are placed under the head of Benares and those found at Jhúsí under the head of Allahabad. Tod's coins are described as obtained in N. W. India.

For facility of verification the figures are given for each reign. It is necessary to observe that the notes which form the basis of my tables are often vaguely expressed, and that in some instances it is impossible to say whether the coin was exhumed or only bought at the locality named.

TABLE OF FIND-SPOTS.

Reign.	*Find-spots.*	*No. of coins.*	Total for reign.
Ghaṭot Kacha.	Jaunpur ?	1	1
Chandra Gupta I.	„ ?	1	
„	Gházípur	1	
„	Benares	1	3
Samudra Gupta.	Kanauj	1	
„	„ ?	1	
„	Saháranpur	1	
„	Mathura	1	
„	Oudh	10	
„	Jaunpur	1	
„	Benares	7*	
„	Gayá	1	
„	Patna ?	1	
„	Húglí	1	25
Chandra Gupta II.	Kanauj	2	
	Bulandshahr	1	
	Cawnpore	2	
	N. W. India	3	
	Oudh	4	
	Gházípur	1	
	Jaunpur	1	
	„ ?	5	
	Mirzapur	1	
	Benares	12*	
	Gorakhpur District	7*	
	Hugli	5	44

* The Barhal hoard comprised about 20 Gupta coins, of which 7 belonged to the reign of Chandra Gupta II; it is not known to what reign the remaining coins belonged, and I have therefore excluded them from the table. In the case of the Bharsar hoard I have only taken credit for the few coins described in detail, but the hoard comprised about 160 Gupta coins, of which 71 belonged to the reign of Chandra Gupta II.

Reign.	*Find-spot.*	*No. of coins.*	*Total for reign.*
Kumára Gupta Mahendra.	N. W. India	1	
	Allahabad (Jhúsi)	14	
	Oudh	3	
	Jaunpur	1	
	Benares	9	
	Gayá	2	
	Mahanada	1	
	Midnapur	1	
	Huglí	7	39
Skanda Gupta.	Kanauj	1	
	Oudh	1	
	Jaunpur ?	1	
	Benares	1	
	Gházipur	1	
	Mahanada	1	6
	Total for all reigns ...	... ...	118

The following figures give the meagre information available concerning the find-spots of the coins mentioned in the Supplement to the Catalogue :—

Chandra	Oudh	1	1
Kumára	Kálighát*	1	1
Skanda	Gayá	1	1
Nára	Oudh	1	
,,	Kálighát*	1	2
Prakáśáditya	Kanauj	1	
	Benares	2	3
		Total	8
	Grand total 118 + 8 ...	...	126

The next following statement exhibits a result of the investigation which may surprise some of my readers.

I. Coins obtained at Kanauj (including 1 doubtful case).

Samudra Gupta ...	...	...	...	2
Chandra Gupta II	...	...	...	2

* The Kálighát hoard comprised over 200 coins, but its detailed composition is not known.

	Skanda Gupta	1	
	Prakáśáditya	1	Total 6
II.	Coins obtained west and north-west of Kanauj.		
	Samudra Gupta	2	
	Chandra Gupta II	6	
	Kumára Gupta Mahendra	2	Total 10
III.	Coins obtained east of Kanauj.		
	Ghaṭot Kacha	1	
	Chandra Gupta I	3	
	Samudra Gupta	20	
	Chandra Gupta II...	36	
	Kumára Gupta Mahendra	38	
	Skanda Gupta	5	
	Doubtful	7	Total 110
			Grand total 126

The above total refers only to the coins described in detail, but, when the entire contents of the Barhal, Allahabad and Bharsar hoards are included, the total of indisputably Gupta coins found east of Kanauj will be about 480. If the entire Kálighát hoard of rude coins of Gupta type be included, the total must be raised to about 690, and, if it be admitted that Warren Hastings' 172 "gold darics" from Benares were Gupta coins, the grand total would amount to about 860. In any case the figure for Kanauj stands at 6. The fact is therefore established with mathematical certainty that Kanauj supplies only an infinitesimal proportion of the Gupta gold coins, the great bulk of which have been obtained far to the east of that city.

Section VI.

The Gupta Mint-Cities and Capital.

In Southern India the ancient native governments permitted subordinate rulers and even private persons to coin in all metals, including gold, with little restriction, but there is no indication of similar laxity having at any time prevailed in Hindustan.*

In Northern India successive dynasties followed, so far as is known, the practice of the Persian kings and Roman emperors, and jealously retained in their own hands the right of coining *gold*.

If this be admitted, it follows that the ancient *gold* coinages of Northern India will have been struck at or near the seats of government of the sovereigns who issued them. If, therefore, we can discover the position of the mint-cities where the gold pieces of the Gupta kings were

* Thomas, Ancient Indian Weights (*Intern. Num. Or.*), p. 57.

struck, we may feel confident that we have also discovered the site of the capital, or capitals, of those princes.

Prinsep designated the Gupta gold coinage by the name of the 'Kanauj series.' Almost without exception later writers on Indian archæology have followed him, and it seems to me, have rather blindly followed him, in assuming the existence of a special connection between the Gupta dynasty and Kanauj.

Not to mention other and less authoritative writers, Mr. Burgess speaks of "the Guptas of Kanauj,"* and Sir E. C. Bayley does not hesitate to affirm explicitly that Kanauj was the Gupta capital†. But what evidence warrants us in asserting that the Gupta kings had their capital at Kanauj? I can find none.

It will not be disputed that the belief in Kanauj being the Gupta capital originated in Prinsep's designation of the gold coins as the 'Kanauj series,' and in his assertion that they were most commonly found at Kanauj. But the statistics given in the last preceding section of this paper, which are indisputable so far as they go, prove that Prinsep was mistaken as to the fact, and that the coins in question are *not* most commonly found at Kanauj. Attention has already been drawn to the circumstance that Prinsep subsequently corrected his earlier and less guarded assertion, and bracketed Jaunpur and Gayá with Kanauj, as the places where the Gupta gold coins were found in greatest abundance; and, from the first, he was careful to note that *no history connected the Guptas and Kanauj.* Prinsep's error, therefore, so far as it was an error, was not a grave one, and his statements offer a very slender foundation for the categorical assertion that Kanauj was the Gupta capital.

It seems to me that Prinsep's misapprehension on the subject can be very easily explained. The fine Retreating Lion coin of Chandra Gupta II was obtained by Lieut. Conolly at Kanauj; and the fact that the publication and study of this coin led to the decipherment of the rest of the series appears to have impressed Prinsep's imagination, and to have influenced him in giving the name of 'Kanauj Series' to this class of gold coins.

However this may be, the solid fact remains that out of 37 coins described by Prinsep, the find-spots of 25 are known more or less accurately, and of these latter only 3 can be traced to Kanauj. Nor have I been able to find a record of a single hoard of Gupta gold coins found at that city, and it need hardly be observed that the occurrence of hoards in certain places is more valuable as evidence for the purposes of the his-

* Archæol. Survey of W. India, II, p. 80.

† Num. Chron. II, 3rd S. (1882) p. 158.

torian than the finding of isolated coins, which may have reached their resting places in any of a hundred different ways.

I think, therefore, that the evidence now presented fully warrants the assertion that *the find-spots of the Gupta gold coins in no way support the statement that Kanauj was the Gupta capital.*

I am not aware that evidence of any other kind has ever been adduced in support of that statement, which has been passed from one writer to another apparently without examination.

I do not deny that Kanauj was in existence during the rule of the Gupta kings, nor that it was included in their dominions. Little appears to be known about its early history, but it has always been reputed one of the most ancient of Indian cities, and we know that it was an important place in 400 A. D. when Fa Hian visited it, and it appears to have been known by name to the geographer Ptolemy about A. D. 140. It is also certain that it was the capital of the eastern dominions of the great Harsha Varddhana in A. D. 634, but all these facts in no wise prove it to have been the Gupta capital.* I am quite willing to admit that Sir E. C. Bayley is right in calling Kanauj 'the Dehli of the Hindus,' if that title be restricted to the centuries between 600 A. D. and the Muhammadan conquest, but I can find no authority for the antedating of this claim to precedence.†

The conclusion arrived at so far is a purely negative one. I shall now consider whether any positive result as to the position of the mints and capital may be obtained from a study of the find-spots of the Gupta gold coins and other evidence.

It may safely be affirmed that the records of the localities, both where hoards and where individual coins were found, indicate unmistakably that the Gupta gold coinage was struck and chiefly current in territories far to the east of Kanauj, and that these territories may be roughly described as the Province of Benares, with some adjoining districts. It seems to me impossible to draw any other conclusion from the evidence which has been set forth in the section on find-spots.‡

* These references are quoted from Genl. Cunningham's Archæol. Rep. I, 280 Sir E. C. Bayley informs me that in the Basle edition of Ptolemy (1533) the name which is supposed to mean Kanauj is written Κανογόρα.

† The phrase 'the Delhi of the Hindus' is quoted from a letter on this subject with which Sir E. C. Bayley favoured me. His theory about the supposed dates in the Gupta era on the mediæval coinage of Kábul (*Num. Chron. 3rd Ser. Vol. II, pp. 128-165 and 291-294*) is of very doubtful correctness, and even if it were proved, does not contribute to the solution of the question discussed in the text. I see no reason for supposing that the use of the Gupta era was connected with the sovereignty of Kanauj.

‡ The scanty evidence as to the *provenance* of the Gupta copper coins (*ante*

The districts around Benares are rich in remains of ancient cities, and at present it does not seem possible to fix on any one of these with certainty as the Gupta capital. Very probably there was more than one capital, even at one and the same time, in the same way as Mahoba, Khajuráho, and Kálinjar may be appropriately described as respectively the civil, religious, and military capitals of the Chandel kingdom in Bundelkhand during mediæval times.

If a choice must be made, I should be inclined to fix upon Páṭaliputra (Patna) as the headquarters of the eastern dominions of the Gupta kings.* It is a little east of the places where the gold coins have been most often found, but is sufficiently near those places to make it quite credible that it was the capital city and chief mint. It must be remembered that the ancient Páṭaliputra has been almost entirely carried away by the Ganges,† and that consequently treasure trove is naturally scarce in the city which is its modern representative. No argument is needed to show that in the time of the Mauryas Páṭaliputra deserved to be called 'the Delhi of the Hindus.' It was still a city in the time of Fa-Hian (400 A. D.), but, when Hwen Thsang visited the spot in 632 A. D., the once splendid metropolis had been reduced to a squalid village.‡ The cause of its ruin is not known, but I would conjecture that the White Huns may have destroyed the famous city.

General Cunningham has pointed out that the account of another Chinese traveller indicates that Páṭaliputra was still flourishing as the capital of a great kingdom between the years 222 and 280 A. D., and has conjectured that the king referred to by the Chinese author was Kumára Gupta Mahendra and that "the decline of Páṭaliputra was due to the fall of the great Gupta dynasty and the consequent removal of the seat of government to another place."§ It will be admitted by all that

p. 153 *note*)" appears, so far as it goes, to indicate that they were issued from the same mints as the gold coins. The silver coinage was evidently provincial.

* Wilford long ago fixed on Patna as the Gupta capital, but in doing so was guided by a mistaken notion that Padmávatí was an equivalent of Páṭaliputra (*Wilson's Vishṇu Purâṇa*, 4to. *edn. p.* 480, *note* 70). I find that the late Mr. Wilton Oldham also speaks of "the Gupta dynasty, the capital of which was in Magadha or Bihár, the city of Páṭaliputra, or the modern Patna" (*Hist. and Stat. Memoir of the Ghâzípur District. Part I. p.* 38). Ayodhya was probably one of the chief cities of the Guptas.

† Arch. Rep. VIII, pp. XII, and 24.

‡ McCrindle, Ancient India, p. 207, *note*.

§ Cunningham, Arch. Rep. XI, 153. An English rendering of Stanislas Julien's revised version of the Chinese text is given in the Indian Antiquary, Vol. IX (1880) p. 17. An earlier version will be found in J. A. S. B., Vol. VI. pp. 61-75. The Chinese author *does not specify Páṭaliputra by name*, but it is probable that Páṭali-

Pāṭaliputra, by reason of its ancient importance, must have been one of the chief cities in the Gupta dominions. We are not, however, altogether restricted to indirect inference for proof of this fact.

The inscription on the back of the Táwá cave at Udayagiri near Bhilsa records that the cave was made by one Sába, whose ancestral name was Virasena a poet, and a resident of Pāṭaliputra, who had come thither with his king, Chandra Gupta.*

The broken inscription at Garhwá near Allahabad, which appears to belong, like that in the Táwá cave, to the reign of Chandra Gupta II, mentions Pāṭaliputra at the end of the eleventh line, but the inscription is so mutilated that the context cannot be made out.†

The inscriptions which give the genealogy of the Gupta family inform us that Kumárí Deví, the queen of Chandra Gupta I, was the daughter of Lichchhavi, an assertion which is fully confirmed by the legend 'Kumárí Deví Lichchhavayaḥ' on the gold coins. It is highly probable that the lapidary and numismatic record means that the queen belonged to the Lichchhavi family of Kshatriyas who resided at Vaiśáli, and are famous for their devotion to the Buddha in earlier times. Vaiśáli is the modern Besáṛh or Besáḍh, 27 miles distant from Patna, (*Cunn. Arch. Rep.* Vol. I, p. 55), and, if the identity of the Lichchhavi family in Buddhist and Gupta times be admitted, the alliance of the Gupta kings with that family is another indication that their capital was at or near Patna. I may note in passing that the alliance is also a proof that the Guptas were a Kshatriya family, and not either Súdras or foreigners. The narrative of I-tsing (*circa* 690-700 *A. D.*) shows that the dominions of Śrí Gupta, the founder of the dynasty, were situated in Magadha, and included Buddha Gaya. He says, "All parts of the world have their appropriate temples, except China, so that priests from that country have many hardships to endure. Eastward, about forty stages [*scil. yojanas*] following the course of the Ganges, we come to the Mrigasikavana Temple. Not far from this is a ruined establishment called the Tchina Temple. The old tradition says that formerly a Mahárája called Śrí Gupta built this for the priests of China. At this time some Chinese priests, some twenty men or so came from Sz'chuan to the Mahábodhi Temple to pay worship to it, on which the king, seeing their piety, gave them as a gift this plot of land. The land now belongs to the king of Eastern India, whose name is Deva Varmma." (*J. R. A. S. Vol. XIII, N. S. pp. 571, 572*). This

putra was the city referred to. If that supposition be correct, Pāṭaliputra *must* have been the Gupta capital, at the period indicated, for at that period it was certainly under Gupta rule.

* Cunningham, Arch. Rep. X, pp. 51, 52.

† Cunningham, Arch. Rep. III, 57.

passage appears to me to be strong evidence that the Gupta dynasty took its rise in Magadha, and that its capital was, consequently, in all probability, Páṭaliputra, the leading city of Magadha.

The well-known passages in the Puráṇas, which mention the Gupta dynasty, also point to the fact that the centre of gravity of their empire lay east of Kanauj. The Vishṇu Puráṇa states that the Guptas of Magadha reigned "along the Ganges to Prayága" (Allahabad), and the Váyu Puráṇa (which is supposed to be more ancient) adds that, besides the regions so specified, Sáketa was included in their dominions.* The expression "along the Ganges to Prayága" evidently refers to the course of the river from Magadha (*i. e.*, the country around Páṭaliputra) on the east, to Prayága on the west.

I was at one time inclined to suppose that the Pauránic texts referred to the later Guptas of Magadha mentioned in the Aphsar inscription,† but I now prefer to accept the general opinion which interprets the texts as referring to the imperial dynasty. Mr. A. Grant's gold Gupta coins were all (except one) obtained in Oudh, and mostly in the neighbourhood of Sáketa (= Ayodhyá, near Faizábád), and Mr. Hooper's were likewise found in Eastern Oudh, which facts are some confirmation of the statement in the Váyu Puráṇa, if referred to the earlier dynasty. There is, moreover, no proof that the small territory of the later Guptas extended so far west as Sáketa, which may have declined before their time, as in A. D. 400 the famous neighbouring city of Srávastí had descended to the rank of a petty village, and in A. D. 632 was completely deserted.‡

The distribution of the architectural and sculptural remains of the Gupta dynasty supplies another argument to prove that the capital of the dominions of the dynasty in Northern India lay further east than is commonly supposed.

If the remains in Central India and Guzerat be excluded, which mark the extent of the western conquests of the later members of the family,§ I think that the only records in stone of the Guptas yet discovered west of Allahabad are the broken inscription at Mathurá, which gives the genealogy of Samudra Gupta,‖ and the dedicatory inscrip-

* Wilson's Vishṇu Puráṇa (quarto edition), p. 479.

† Cunningham, Arch. Rep. III, 136, and XVI, p. 79. A dynasty, with the family name of Gupta, reigned in Orissa probably as late as the tenth century A. D. (*Ind. Antiquary, Vol. V, pp.* 55 *seqq.*)

‡ Cunningham, Arch. Rep. I, 333, referring to Fa-Hian and Hwen Thsang.

§ I concur with Prof. Oldenberg in regarding as a forgery the so-called Júnagaṛh tradition published by Major Watson (*Ind. Ant. II*, 312).

‖ Cunn. Arch. Rep. I, 237 and III, 36.

tions at Bilsaṛ (20 miles N. E. of Etá) containing the genealogy of Kumára Gupta.* A copper-plate grant dated in the reign of Skanda Gupta has been found at Indor Khera, eight miles S. S. W. of Anúpshahr.† This is a meagre list when compared with the catalogue of inscribed pillars and ruined edifices which are known to exist eastward. Allahabad (Pray ága) possesses the great inscription containing the history of Samudra Gupta, engraved after his death on the pillar set up by the great Maurya emperor of Páṭaliputra,‡ and in the neighbourhood of Allahabad numerous ruins and inscriptions of the Gupta period are found at Kosambi (Kosam),§ Garḥwá or Bhaṭgaṛh,‖ and Bithá-Deoriyá.¶ Going further east, we find at Bhitarí in the Gházípur district, between Benares and Gházípur, the celebrated inscribed pillar giving the history of Skanda Gupta, associated with the ruins of extensive brick buildings belonging to the reign of his predecessor Kumára.** The uninscribed pillar at Zamániá in the same district appears to be of about the same date;†† and still further east, Bihár has pillars to show, which were inscribed in the reigns of Kumára and Skanda,‡‡ and in the Gorakhpur district, north of Gházípur, is to be seen the Jain pillar at Kahaon dedicated in the reign of Skanda Gupta.§§

The distribution of the architectural and sculptural remains, therefore, closely coincides with that of the gold and copper coins, and is equally adverse to the claim of Kannuj to the honour of having been the Gupta capital.

There is no reason to suppose that the sway of the Guptas extended over Lower Bengal, and it seems probable that the coins found in that province came there in the course of trade and travel, and mark the line of a trade route which led to Támralipti or some other ancient port at the mouths of the Ganges.‖‖

Sir E. C. Bayley has been good enough to favour me with his criticism on the views above enunciated, the outline of which was submitted

* *Ibid.* XI, 17.

† *Ibid.* XII, 38.

‡ Prinsep's Essays, Vol. I, p. 233.

§ Cunningham Arch. Rep X, 3 *seqq.*

‖ *Ibid.*, III, 53 *seqq.* and X, 10, *seqq.*

¶ *Ibid.* III, 48 and X, 7, 8.

** *Ibid.* I. 97 *seqq.*, etc. The second vowel in Bhitarí is not long as it is generally marked.

†† *Ibid.* III, 62.

‡‡ *Ibid.* I, 36.

§§ The corrected facsimile and translation with notes are given in Ind. Antiquary for 1881, pp. 124-126.

‖‖ The Chinese account above referred to proves that the Indian capital in the middle of the third century A. D. was a place of active trade.

to him. He urges that "gold, which in old Indian times, was not the current circulation of *every day* transactions, would collect, not at seats of Government, but round centres of commerce, such as Allahabad, Benares, and Faizábád always have been, and they are also centres of pilgrimage, which attract much gold and silver.

"It is almost an infallible indication of the neighbourhood of a sovereign's capital when his coins of very *minute* value are found in large numbers. It is only in the markets of large towns or cities that such a coinage was of use in India, owing to the social habits of the country, but such cities rarely existed except at the head-quarters of Government. The minute coins of the Pathán kings abound within twenty miles of Delhi, but are very rare elsewhere. Their gold coins are as common elsewhere as at Delhi. The copper coins of the Guptas are so rare, however, that no deduction can be drawn from them."

These remarks show the importance of tracing the *provenance* of the Gupta copper coins, which, as already observed, do not appear to be so rare as Sir E. C. Bayley supposes.

His remark that such "markets of large towns or cities" as Allahabad, Benares, and Faizábád were in the Gupta period, "rarely existed except at the head-quarters of Government" appears to me to lend much support to the inference which I have drawn from the recorded find-spots of the Gupta coins, especially the large hoards. However, the reader has now both views before him, and can judge for himself.

Section VII.

Conclusion.

I must now bring to a close this long but imperfect introductory essay, and invite the patient reader to enter upon the dry details of the Catalogue. My general description of the Gupta gold coins is specially deficient in two respects, namely, in omitting all systematic discussion of the fabric and of the palæography of the coins.

The details occasionally given in the Catalogue are sufficient to indicate that the standard of purity of metal was not always uniform, but I have not had an opportunity for procuring analyses of any of the coins, and must content myself with remarking that this subject should not be overlooked.

Circumstances have not permitted me to study the original coins sufficiently at leisure in order to work out the palæography of the legends, but I am convinced that the detailed study of this subject would not be barren of result. The alphabetical characters on the coins do not vary very much, but the variations are sufficient to deserve attention and

investigation.* It seems to me that in the voluminous discussions respecting the date of the Guptas sufficient stress has not been laid on the palæography of their lapidary and numismatic inscriptions. A good book on the Elements of the Palæography of Northern India is badly wanted.

A minute study of the epigraphy of the coins might perhaps lead to a more satisfactory chronological arrangement of the several types of each reign than I have been able to make. The types are arranged in my Catalogue in an order which seemed to be not inconsistent with chronological succession, but the arrangement does not profess to be satisfactory, and in many respects is arbitrary, and open to correction.

The materials used in the compilation of my Catalogue are detailed below :—

I. Published Coins, *viz.* :—

1. Col. Tod's paper in Trans. Roy. As. Soc. (1827), Vol. I. p. 340, and Pl. XII, 4th series.†

2. H. H. Wilson's paper in Asiatic Researches, Vol. XVII, and Pl. I.‡

3. Marsden's Numismata Orientalia, Nos. ML-MLIX inclusive.§

4. Wilson's Ariana Antiqua, Pl. XVIII.‖

* Some desultory observations concerning the palæography of the Gupta coins generally will be found in Mr. Thomas's essay on the Coins of the Gupta Dynasty (*J. A. S. B. XXIV, pp. 491, 505, 510; 512 and 517*), and concerning that of the silver coins in Cunningham's Arch. Rep. IX, 21-26. In one corner of India, the Punjáb hills between the Indus and the Jumna, the Gupta alphabet has never been changed, and "the Baniyas of the hills still keep their accounts in Gupta characters." (*Cunn. Arch. Rep. XIV, p. 121*). This very remarkable fact should be borne in mind by all palæographers.

† Fig. 1, Kumára Gupta Mahendra (Archer, class I α); fig. 2, Chandra Gupta II (Archer, class II α); fig. 3, Chandra Gupta II, (Lion-Trampler, var. α); fig. 4, ditto (ditto, var. γ).

‡ Fig. 5, Samudra Gupta (Javelin, var. 1); fig. 7, ditto. (ditto, var. 2); fig. 12, Skanda Gupta (King and Queen, = P. E. XXIII, 24); fig. 13, Chandra Gupta II (Archer. class II α); fig. 17, Prakáśáditya. (Lion and Horseman); fig. 18, Kumára Gupta Mahendra (Horseman to Left); fig. 19, Samudra Gupta, (Lyrist).

§ ML, Chandra Gupta II (Archer, class II α); MLI and MLVI, Chandra Gupta? (Archer, barbarous); MLII and MLIII, Kumára Gupta? (Archer, barbarous); MLIV, Nára Gupta, (Archer, barbarous); MLV, Skanda Gupta?, (Archer, barbarous); MLVII, Chandra Gupta II (Archer, class I β); MLVIII, Chandra Gupta I (King and Queen); MLIX, Kumára Gupta Mahendra, (Horseman to Right, var. γ.)

‖ Fig. 1, Chandra Gupta II, (Swordsman and Umbrella); fig. 2, Samudra Gupta (Aśwamedha); fig. 3, Chandra Gupta I, (King and Queen); fig. 4, Chandra Gupta II (Archer, class II); fig. 5, Chandra Gupta II, (Lion-Trampler, var. α);

5. Memo. on ancient gold coins found at Bharsar, near Benares; by Major Kittoe and Mr. E. C. Bayley; 32 coins described. (*J. A. S. B. XXI* (1852) *pp.* 390-400 *and Pl. XII, figs* 1-9.)

6. Prinsep's Essays and Plates. The plates of Gupta gold coins in Thomas's edition are,

Pl.	XXII,	figs.	16 and 17	=	J. A. S. B.	IV, Pl.	XXXVIII.
„	XXIII,	„	18 to 32	=	„	„ „	XXXIX.
„	XXIX,	„	11 „ 20	=	„	V, „	XXXVI.
„	XXX,	„	1 „ 10	=	„	„ „	XXXVIII.

(The engravings of Gupta gold coins in J. R. A. S. Vol. XII, O. S. (1850) are reproductions of Prinsep's plates, and Plates X and XI of H. T. Prinsep's Note on the Historical discoveries deducible from the Recent discoveries in Afghanistan (*Lond.* 1844) are equivalent respectively to Pls. XXII and XXIX in Thomas's edition of Prinsep's Essays.)

7. E. Thomas's original Catalogue of Gupta Gold Coins in J. A. S. B. XXIV (1855), pp. 487-502.

8. E. Thomas's Revised Catalogue of Gupta Gold Coins in his edition of Prinsep's Essays, (1858), Vol. I, pp. 377-387.

9. E. Thomas's Records of the Gupta Dynasty, (*Trübner*, 1876), *pp.* 21-24, and Autotype Pl. figs 1-5. (This work is a reprint of Chapter III in Burgess' Archæol. Rep. for Western India, for the year 1874-5).

10. Sundry miscellaneous notices, as cited in the Catalogue.*

II. British Museum Collection.†

III. India Office Collection, now in B. M.†

IV. Cabinet of Sir E. C. Bayley, K. C. S. I., and other coins communicated by him.‡

figs. 6 and 9, Samudra Gupta (Javelin, var. 1); figs. 7 and 8, ditto, (Archer, var. α); fig. 10, ditto, (Boy and Battle-axe, var. γ); fig. 11, Kumára Gupta Mahendra, (Archer, class II); fig. 12, ditto, (ditto, class I α); fig. 13, ditto (Peacock var, α); fig. 14, Ghaṭot Kacha, (Solar Standard); [fig. 15, Chandra Gupta II, copper]; fig. 16, Kumára Gupta Mahendra, (Horseman to Right, var. α); fig. 17, Chandra Gupta II, (Lancer, var. β); figs. 18 and 19, Prakásáditya, (Lion and Horseman); fig. 20. "of doubtful authenticity"; fig. 21, Chandra Gupta ?, (Archer, barbarous); fig. 22, Nára Gupta (Archer, barbarous); fig. 23, Kumára Gupta ? (ditto, ditto); fig. 24, Vishṇu Gupta (ditto, ditto); figs. 25-28, rude mediæval imitations of Gupta type.

* I believe that I have seen all descriptions of Gupta gold coins in English publications, but, if any should have escaped my notice, I hope that some critic will rectify the omission. I am not aware of any foreign publications on the subject.

† I am very specially indebted to Prof. Percy Gardner for the trouble he took in weighing for me all the specimens in the British Museum and India Office collections, and for much kind assistance in other ways. My acknowledgments are also due to Mr. R. S. Poole and the other officials in the Coin Room of the British Museum for their courteous aid.

‡ Sir E. C. Bayley generously lent me his coins for examination, and has

V. Cabinet of A. Grant, Esq.,* C. I. E.
VI. Cabinet of W. Theobald, Esq.†
VII. Collection of the Asiatic Society of Bengal.‡
VIII. The Hugli hoard.
IX. Cabinet of Major-General Cunningham, C. S. I., Director Genl. of the Archæological Survey of India.§
X. Bodleian collection.‖
XI. Cabinet of J. Hooper, Esq., B. C. S.¶
XII. Cabinet of H. Rivett-Carnac, Esq., C. S., C. I. E.

favoured me with several valuable communications. While these sheets are passing through the press the melancholy news of his death has reached me.

* Mr. A. Grant, C. I. E. was also good enough to lend me his valuable collection of Gupta gold coins, and to give me all the information he could on the subject.

† Mr. W. Theobald has kindly favoured me with full particulars of the specimens in his possession.

‡ I am indebted to Dr. Hoernle for a list of the Gupta gold coins in the cabinet of the A. S. B., and of those comprised in the Húglí hoard.

§ General Cunningham has favoured me with a rough list of the Gupta gold and silver coins in his cabinet, and with sundry valuable notes.

‖ Mr. W. S. W. Vaux, F. R. S. has kindly given me information about some of the Gupta coins in the Bodleian collection.

¶ Mr. Hooper has been good enough to let me examine his coins.

TABLE OF WEIGHTS.*

Reign.	Type.	Variety.	Number of Coins weighed.	Lowest weight.	Highest weight.	Average weight.	Remarks.
Ghaṭot Kacha.	Solar standard	.....	4	111·0	118·0	114·95	
Chandra Gupta I.	King & Queen	.....	4	113·0	123·8	117·57	
Samudra Gupta.	Javelin	1. Genl. type.	12	113·4	118·6	115·85	Excluding W. T., 106, and I. O., 108·2.
,,	,,	2.	...	...	...	...	
,,	,,	3.	1	...	...	119·2	
,,	,,	4.	2	114·0	119·3	116·65	
,,	Archer.	1. Apratiratha	5	117·1	120·0	118·34	
,,	,,	2. Parákrama	3	110·0	114·0	111·33	
,,	Lyrist.	.....	5	111·0	122·0	118·12	
,,	Aśwamedha.	.....	6	113·2	117·7	116·18	
,,	Tiger.	.....	1	...	...	116·6	Unique.
,,	Boy and Battle-axe.	.....	4	116·7	123·4	118·7	All varieties; viz., 3 of α, and 1 of β.
Chandra Gupta II.	Couch.	.....	1	...	...	114·7	Unique.
,,	Archer.	Class I, α.	1	...	...	113·2	
,,	,,	,, β.	2	118·0	120·9	119·45	
,,	,,	Class II, α.	17	119·2	127·6	123·04	Excluding No. 5 Bharsar, 112·0.
,,	,,	,, β.	8	126·6	132·5	129·77	
,,	,,	,, γ.	2	126·0	126·0	126·0	
,,	,,	,, δ.	2	112·0	118·4	115·2	
,,	,,	,, ε.	1	...	...	122·3	
,,	Lancer.	α	2	118·6	119·7	119·15	
,,	,,	β	...	...	...	...	
,,	Horseman to Left.	.....	3	122·0	124·0	122·66	
,,	Lion-Trampler	α	2	115·4	122·0	118·52	
,,	,,	β	1				
,,	,,	γ	...	...	...	...	
,,	,,	δ	...	...	...	...	

* The weights of twelve coins belonging to Mr. H. Rivett-Carnac, C. I. E. were received too late for insertion in the Table. They are as follows:—

Chandra Gupta I.	King and Queen type	;	119·00 and 119·50.
Samudra Gupta.	Javelin ,,	;	117·65.
,, ,,	Aśwamedha ,,	;	117·00.
Chandra Gupta II.	Archer ,, (Class I)	;	118·90.
,, ,,	,, ,, (,, II)	;	118·60.
,, ,,	Lion-Trampler ,,	;	120·45 and 122·00.
,, ,,	Combatant Lion ,,	;	118·60.
Kumára Gupta Mahendra.	Archer ,,	;	126·75.
,, ,,	Peacock ,,	;	127·50 and 127·60.

The weight of the unique coin of Kumára Gupta Mahendra of the Two Queens type is not stated.

Reign.	Type.	Variety.	Number of Coins weighed.	Lowest weight.	Highest weight.	Average weight.	Remarks.
Chandra Gupta II.	Combatant Lion.	.....	3	111·4	120·9	116·56	
,,	Retreating Lion.	.....	1	...	...	123·0	Unique.
,,	Swordsman & Umbrella.	.....	4	117·5	121·0	119·7	
Kumára Gupta Mahendra.	Swordsman	.....	1	...	...	124·2	Unique.
,,	Archer.	Class I, α.	3	123	124·7	124·06	Excluding B. M. Prinsep, worn, weight 106·7
,,	,,	,, β.	...	...	...	...	
,,	,,	,, γ.	1	...	...	125·0	
,,	,,	,, δ.	1	...	...	125·0	
,,	,,	,, ε.	1	...	...	126·0	
,,	,,	,, ζ.	...	...	...	...	Av. of class, 6 coins, 124·7.
,,	,,	Class II.	3	119·5	123·5	121·46	
,,	Horseman to Right.	α.	2	124·5	125·0	124·75	
,,	,,	β.	1	...	...	126·5	
,,	,,	γ.	11	124·0	127·2	125·3	B. M., E. T., worn, wt. 117·3, excluded.
,,	Horseman to Left.	.....	5	123·2	126·0	124·2	
,,	Peacock.	α.	3	126·5	128·6	127·83	
,,	,,	β.	5	124·0	128·2	126·72	
,,	Lion-Trampler	α.	...	...	...	...	
,,	,,	β.	1	...	...	127·2	
,,	Combatant Lion.	.....	2	124·5	126·1	125·3	
Skanda Gupta.	Archer.	Srí Skanda Gupta.	9	125·0	132·5	129·21	
,,	King & Queen.	.....	1	...	...	128·8	

SUPPLEMENT.

Chandra Gupta (barbarous).	Archer.	.....	3	144·5	148	145·66	
Kumára Gupta (ditto).	,,	.....	4	143	148·7	146·3	
Skanda Gupta (ditto).	,,	Kramáditya.	1	...	...	141·4	
Nára Gupta.	,,	.....	5	143·5	148·7	145·66	
Prakáśáditya.	Lion and Horseman.	.....	5	145·0	146·2	145·6	Excluding B, M. Pringle. worn, 136·0.
Grand Total,...	.....	.....	165	110	148·7	...	

CLASSIFIED AND DETAILED CATALOGUE.

Abbreviations.

A. A.	...	...	Wilson's Ariana Antiqua.
A. C.	...	...	Cabinet of Major Gen. Cunningham, C.S.I., C. I. E.
A. G.	...	...	Cabinet of Alexander Grant, Esq., C. I. E.*
A. S. B.	...	...	Asiatic Society of Bengal.
As. Res.	...	...	Asiatic Researches.
B.	...	...	Bodleian collection.
B. M.	...	...	British Museum collection.
C.	...	...	Cabinet of H. Rivett-Carnac, Esq., C.S., C.I.E.
E. C. B.	...	...	Cabinet of the late Sir E. C. Bayley, K.C.S.I.
H.	...	...	„ „ J. Hooper, Esq., B. C. S.
I. O.	...	...	India Office collection (now in B. M.)
J. A. S. B.	...	...	Journal of Asiatic Society of Bengal.
J. R. A. S.	...	...	Journal of Royal Asiatic Society.
l.	...	...	Left (of reader).
Marsden.	...	...	Marsden's Numismata Orientalia.
Mon.	...	...	Monogram.
P. E.	...	...	Prinsep's Essays, ed. Thomas.
r.	...	...	Right (of reader).
Records.	...	...	Records of Gupta Dynasty (Thomas, 1876).
Rev. Catal.	...	...	Thomas' Revised Catalogue of Gupta Gold Coins in P. E. Vol. I, pp. 377-387.
Wt.	...	...	Weight in English grains.
W. T.	...	...	Cabinet of W. Theobald, Esq.

GHAṬOT KACHA.

Solar Standard Type.

(*J. A. S. B. XXIV, pp.* 487-491, *class A; Rev. Catal. class A.*,)

Obv. King, standing, with head to l.; he wears close cap, tailed coat, and leggings, of Indo-Scythian style with some modification; his l. hand either grasps, or extends across, a standard bearing a symbol of the rayed sun; his r. hand casts incense on a small altar. Under l. arm Kacha,' which is sometimes read as 'Kácha.'

* Mr. A. Grant's Gupta gold coins are now in the Ermitage Impérial at St. Petersburg, the Director of which institution, M. Tiesenhausen, obligingly supplied me with impressions of the coins.

Marginal legend, as restored by Thomas, is कामभिरक्तमंजय कचोग्रमवजत्य द्र [or द्य], which, after needful corrections, is rendered 'Kacha, having subdued the earth, secures victory by excellent deeds'; but *quære?* Prinsep read काम नरक्तम ज घ, and interpreted 'Kacha, son of an excellent man resembling Káma', 'Gha'—standing for 'Ghaṭot.'

Rev. Goddess, standing to l., holding lotus-flower in r. hand, and grasping cornucopia in l. arm. Legend in r. field distinct सर्वराजोच्छेत्त, 'exterminator of all rájás.' Mon.*

References and Remarks.

P. E. XXIX, 12; mon. 1; wt. not stated; legend described as being in the "most unequivocal and well-formed Nágarí"; from Tregear collection.

B. M. Prinsep; mon. 2; wt. 115·2; the B. M. label may be wrong, for Thomas (*J. A. S. B. XXIV, p.* 491) ascribes mon. 2 to a coin in Freeling collection. (*Pl. I. fig.* 1.)

A. A. XVIII, 4; mon. 4*a*; wt. not stated. This figure purports to be a copy of P. E. XXIX, 12, but there is some mistake, for the mons. differ. Pennons attached to shaft of standard. *Obv.* marginal legend misread by Wilson.

B. M., Eden, two specimens; mon. in both 4*a*, as in A. A. XVIII, 4; wts. 111 and 115·6 respectively. The latter coin is figured in Records, autotype Pl. fig. 1, and described *ibid*, p. 21, where the wt. is stated to be 116.

W. T.; mon. imperfect; wt. 118.

A. S. B.; one specimen, no details stated.

B. ditto, ditto.

A. C.; three specimens, no details stated.

Mr. Thomas (*J. A. S. B. XXIV, p.* 490) notes the existence of a specimen in the Stacy collection, and another in the Bush cabinet, both with the same mon. as A. A. XVIII, 4. He observes that the letter *m* in the Freeling and Tregear coins is of more ancient form than that in the Stacy, Bush, and A. A. specimens, in which latter the form of the letter resembles that used in the Gupta lapidary inscriptions.

The epithet 'exterminator of all rájás' occurs in the Bhitarí Pillar inscription.

A solar standard "exactly similar" to that on these gold coins is inserted below the middle of the Tushám inscription, which is supposed to record the conquest of Ghaṭot Kacha by the Tushára king Vishṇu, but

* Throughout the series the *obv.* king and *rev.* goddess have almost always a nimbus round the head, and the *rev.* margin is generally surrounded by a more or less perfect dotted circle. I have not thought it necessary to note these items in the detailed descriptions.

unfortunately the published translation of that inscription is not to be depended on. (*See Cunningham, Arch. Rep. V, p.* 140, *Pl. XL.*)

CHANDRA GUPTA I.

King and Queen Type.

(*J. A. S. B. XXIV, p.* 493, *class B; Rev. Catal. class C.*)

Obv. King, wearing tailed coat and close-fitting cap, standing to l., facing queen, who looks to r. King's l. arm resting on spear, his r. hand raised.

Under king's l. arm चन्द्र | गुप्त 'Chandra Gupta or चन्द्र 'Chandra.'

Behind queen कुमारी देवी श्री, 'Kumárí Devi Srí.'

Rev. Goddess, holding fillet in r. hand, and cornucopia in l. arm, seated on couchant lion, which faces r., except in two coins. Legend in field to r., लिच्छवयः, 'Lichchhavayaḥ.' Mon.

References and Remarks.

Marsden MLVIII. B. M. brought from India by Lord Valentine (Mountmorris); mon. 5, wt. 115·3.

Under king's arms चन्द्र | गुप्त 'Chandra Gupta.'

Condition inferior, and Queen's name illegible. In Marsden's text *rev.* lion erroneously described as 'a throne'.

P. E. Vol. I, p. 369, Pl. XXIX, 15. Under king's arms चन्द्र | गुप्त 'Chandra Gupta.' Queen's name illegible; mon. 8*d*; wt. not stated. The coin figured was in Stacy collection, and a duplicate in Tregear's.

B. M., purchased from a dealer in 1878. Under king's arm चन्द्र | गुप्त 'Chandra Gupta'; diameter 8; mon. 3*a*; wt. 123·8; condition very fine, and queen's name plainly legible. (*Pl. I fig.* 2.)

A. A. XVIII. 3; B. M., Swiney; under king's arm चन्द्र, 'Chandra' spear tipped with crescent; queen's name mostly legible; diameter ·8; mon. 4*b*; wt. 118·2.

W. T.; *rev.* lion facing l.; mon. 22*b*; wt. 113; bought at Benares.

B.; *rev.* lion to l.; king raises open hand in front of queen's face.

C.; two specimens, viz., one obtained at Gházípur, wt. 119; and one obtained at Benares, wt. 119·5.

Queen's name and *rev.* legend read correctly for first time by Cunningham (*Arch. Rep., Vol. I, Introd. p. xxxiv*), who possesses three coins of this type, in two of which the legends are distinct.

The attribution of this type is certain, because we know from the Bhitarí and Bilsar Pillar inscriptions that Kumári Devi was the queen of Chandra Gupta I, whereas the consort of Chandra Gupta II was named Dhruvá Devi. No other type of the coinage of Chandra Gupta I, is known. The Swordsman and Umbrella coins are sometimes attributed to him, but should, almost certainly, be assigned to Chandra Gupta II.

The late Sir E. C. Bayley possessed two coins of Indo-Scythian style, which, in his opinion, may possibly have been struck by Chandra Gupta I (wt. 120·3, and 118·3). The name under the king's arm is doubtfully read as 'Chandra.'

The B. M. collection contains two coins, which are nearly, though not quite, identical with Sir E. C. Bayley's. The B. M. coins have a legend behind the spear, which is wanting in the others. I give a figure of one of the B. M. specimens, wt. 119·2 (*Pl. IV, fig.* 6) to illustrate the style, and for comparison with the undoubted Gupta series. Mr. Thomas reads the name under the king's arm on the coin figured as either 'Chandra' or 'Bhadri,' and the legend behind the spear as 'Shaṇḍhi,' a Scythian tribal name. (*Cf. Indo-Scythian Coins with Hindi Legends, Nos.* 10 *and* 11) Sir E. C. Bayley concurred with Mr. Thomas in classing this piece as Indo-Scythian, and believed that it was minted by one of the Indo-Scythian princes in the Punjáb, contemporary with the earlier Gupta kings. The specimens in Sir E. C. Bayley's cabinet, above referred to, resemble the coin figured so closely in style, in spite of the want of legend behind the spear, that I do not think they can be attributed to Chandra Gupta I. They seem to me to belong to the same class as the 'Shaṇḍhi' coin.

SAMUDRA GUPTA.

Javelin Type.

(*J. A. S. B. XXIV, pp.* 493-495, *class C; Rev. Catal., D,* 2 *D, and* 3 *D.*)

Obv. King standing, generally to l., dressed nearly same as king in coins of Ghaṭot Kacha, casting incense with r. hand on small altar in l. field, and leaning with l. arm on spear or javelin; behind r. arm the bird standard.

Under l. arm स मु द्र 'Samudra', or in var. 4, स मु द्र | ग प्त 'Samudra Gupta.' In var. 2, king to r., with javelin in r. hand, name under r. arm. Legend (as restored by Thomas, but in parts doubtful) समरशत वततवजयजितरेपरदवज, which, when corrected into grammatical Sanskrit, is rendered 'Overcoming hostile kings in triumphant victory (over those) opposing in a hundred battles.' This legend follows margin, except in var. 3.

Rev. In all var.; goddess, facing front, seated on raised throne with four lathe-turned legs, her feet resting on a footstool, r. hand holding fillet, l. arm grasping cornucopia. Legend, near r. margin, **पराक्रमः**, 'the hero.' Mon.

References and Remarks.

Var. 1, general type, as described above, (class D. of Rev. Catal.)

A. A. XVIII, 6; mon. 3*a*; wt. not stated; perhaps same as B. M. coin without label, and with same mon.; wt. 117·8.

ib. ib., 9; mon. 20*a*; wt. not stated; perhaps same as B. M. Twisden coin with same mon.; wt. 117·4.

As. Res. XVII, Pl. I, 7; engraved from a drawing; mon. 3*a*; wt. not stated.

P. E. XXII, 16; from Gen. Ventura's coll.; mon. 9; wt. not stated.

ib., ib., 17; from cabinet of Col. Smith of Patna; seems to be the B. M. Prinsep coin, with mon. 3*a*.; wt. 114.

ib. XXIX, 14; found at Gayá; mon. 20*b*; wt. not stated.

B. M. Prinsep; mon. 8*a*; wt. 117-8. (*Plate II, fig. 3.*)

A. G.; mon. 8*a* nearly; wt. 114·5; *obv.* legend ..... **रज समर श्रत [व]**; from Oudh.

ibid; mon. 4*b*; wt. 116·5; *obv.* legend **[श्र] तवतविजयज**; from Oudh; in fine condition.

W. T.; mon. 6*b*; wt. 114; of pale gold; bought at Mathurá.

ibid; mon. indistinct; wt. 106.

A. S. B.; two specimens; wts. not stated; mon. of one is 19*a*.

Húglí hoard; one specimen; no details stated.

I. O., No. 1; mon. 3*a*; wt. 114·4; in poor condition.

ib. No. 2; mon. 3*a*; wt. 108·2; ditto.

ib. No. 3; mon. 4*c*; wt. 113·4; ditto.

ib. No. 4; ditto, ditto; wt. 114·8; ditto.

ib. No. 5; mon. 22; wt. 118·6; ditto.

Bharsar hoard, No. 4 of Samudra; mon. 3*a*; wt. 117; "a small dumpy coin, gold pale." (*J. A. S. B. XXI, 396.*)

A. C.; 4 specimens, apparently of this variety, but details are wanting.

B.; one specimen.

H.; two specimens, part of considerable find from ancient mound on the Rapti river in pargana Utraula of Gonda district in Oudh. Mr. H. S. Boys, C. S. also has a specimen from the same find.

Var. 2; king to r., javelin in r. hand, name under r. arm.

As. Res. XVII, Pl. I, 5; mon. imperfect; wt. not stated.

Var. 3; king to l., obv. legend parallel to javelin (class 2 D of Rev Catal.).

B. M., Eden; *obv.* legend? **तवविजयोजितरे**; mon. 4*c*; wt. 119·2 (*Pl. II, fig. 4*); in fine condition.

Var. 4; name on both sides of javelin **स म अँ | ग अँ**

B. M., Bush ; mon. 4*c* ; wt. 119·3 ; in fine condition (*Plate II, fig. 5*).
Bharsar hoard, No. 5 of Samudra ; mon. 3*a* ; wt. 114 (*J. A. S. B. XXI, 396*).
A. C. ; one specimen, no details stated.
C. ; obtained at Mathura ; wt. 117·65.

SAMUDRA GUPTA.

Archer Type.

(*J. A. S. B. XXIV*, 496, *class C ; Rev. Catal., class E.*)

Obv. King standing to l. arm resting on bow, and r. hand either holding arrow (var. α), or offering incense on altar (var. β). Bird-standard adorned with pennons behind r. arm ; marginal legend imperfect ; see details below ; under l. arm

'Samudra.'

Rev. Throned goddess with fillet and cornucopia, as in Javelin type. Legend in var. α is **अप्रतिरथः**, 'invincible in his war-chariot,' and in var. β is **पराक्रमः**, 'the hero,' as in Javelin type. Mon.

References and Remarks.

Var. α ; *no altar on obv. ; rev. legend* **अप्रतिरथः**

A. A. XVIII, 7 ; from Swiney coll. ; mon. 19*a* ; wt. not stated.
ib., *ib.*, 8 ; in I. O. ; mon. 22, irregular ; wt. 120.
P. E. XXIII, 19 ; in B. M. ; dug up at Jaunpur by Tregear along with Chandra Gupta the Second's coin of Archer type, class I α ; mon. 21, irregular ; wt. 117·4.
B. M. Eden ; mon. 4*c* ; wt. 118 ; in fine condition ; *obv.* legend [**चत**] **वज य तृः** [**थ**] **अप्रतिरथ वजत्यजितिमव** (*Plate II, fig. 6.*)
A. G. ; mon. indistinct ; wt. 117·1 ; *obv.* legend ... **तद्वजयत** as in I. O. coin ; from Oudh.
ibid ; mon. indistinct ; wt. 119·2 ; *obv.* legend on l. margin ...**वजयत**, and on r. margin **जत्य** [**चिति**] **मव** [*or* **त**] ; from Oudh.
A. C. ; 1 specimen, no details stated.
B. ; ditto , ditto.

Var. β ; *altar on obv. ; rev. legend* **पराक्रमः**

Bharsar hoard, Nos. 1 and 3 of Samudra, with duplicate of No. 1 ; wt. of Nos. 1 and 3, 110 each ; wt. of duplicate 114. Apparently no marginal *obv.* legend on No. 1 ; that of No. 3 "very imperfect ;" the gold of No. 3 "pale and alloyed." (*J. A. S. B. XXI, pp. 395, 396, 400.*)

SAMUDRA GUPTA.

Lyrist Type.

(*J. A. S. B. XXIV*, 498, *class D* ; *Rev. Catal., class G.*)

Obv. King, wearing close cap and tight drawers, to front, with head turned to l. seated on high-backed couch, over edge of which his feet are dangling. He is playing an Indian lyre (*víṇá*), which rests on his lap.

On footstool से 'Se,' as under horse in Aśwamedha type.

Marginal legend महाराजधिराज श्री समुद्र गुप्तः, 'the supreme king of kings, Samudra Gupta.'

Rev. Female figure, turned to l. seated on Indian wicker stool (*moṛhá*), holding in r. hand fillet, and in l. cornucopia. Between figure and legend a vertical line or mace.

Legend समुद्र गुप्तः 'Samudra Gupta.'

Mon. sometimes wanting.

References and Remarks.

P. E. XXIII, 26. From Stacy coll. ; no mon. ; wt. not stated ; is probably the B. M. Prinsep coin, wt. 119·5, which is a fine broad, thin coin ; design in very low relief. A similar coin in fine condition in A. G. coll. ; wt. 117·4, procured in Oudh.

B. M. Eden. Broad coin, in good condition as last ; on *obv.* king's name is written समुद्र Sarmudra' ; no mon. ; wt. 111. (*Plate II, fig. 7.*) There is also a specimen of this variety in A. S. B. ; wt. not stated.

I. O. Coin of smaller diameter, and thicker ; *obv.* legend imperfect ; *rev.* legend as usual ; mon. 11 ; wt. 120·7. (*Plate II, fig. 8.*)

As. Res. XVII, Pl. I, 19. From a drawing of a coin said to belong to Mrs. White of Fatehgarh ; seems to be a duplicate of P. E. XXIII, 26 ; no mon. ; wt. not stated. Wilson mistook the lyre for a pillow.

No. 2 of Samudra from Bharsar hoard ; *obv.* legend mostly illegible ; "a fine specimen and in high relief ;" mon. 8*a* ; wt. 122. (*J. A. S. B. XXI, pp. 392, 396, and Plate XII, 5. The description is not quite accurate, and the engraving is very bad.*)

A. C. ; 3 specimens, no details stated.

H. ; 1 specimen from pargana Nawabganj in Gonda district opposite Ayodhya.

SAMUDRA GUPTA.

Aśwamedha Type.

(*J. A. S. B. XXIV*, 498, *class E* ; *Rev. Catal., class I.*)

Obv. Horse, standing to l. unattended, occupying most of field. In front of horse an altar, from top of which springs a bent pole,

carrying three long streamers (described as 'waving flame' by Wilson), which occupy top of field. Between horse's legs से 'Se,' of which meaning is not known, but the same character is found on the footstool on *obv.* of Samudra's Lyrist coins. Marginal legend imperfect; as restored by Thomas it reads नवजमधः राजधिराज श्रथिवी जियत्य, 'King of kings, having conquered the earth ...'; the first word appears corrupt.

Rev. Female, standing to l. holding in r. hand handle of yak's tail fly-whisk *(chaurí)*, which rests on her r. shoulder. In front of her a spear or standard, adorned with pennons; her l. hand hangs empty by her side. Legend in r. field अश्वमेध पराक्रमः, 'the hero of the Aśwamedha.'

No monogram.

References and Remarks.

P. E. XXIII, 31; in B. M. and labelled as from Kananj, collected by Conolly, but Prinsep says it was given to him by Miss Watson. No *obv.* legend, except the character से under the horse.

Wt. 117·7; condition fair. Seems to be the coin described and figured in Records of Gupta Dynasty p. 22, Autotype Pl. fig. 4.

P. E. XXIII, 32; from Stacy collection; "more perfect" than preceding; traces of *obv.* marginal legend.
Wt. not stated.

B. M. Eden coll. Wt. 117: condition good: part of marginal legend. *(Pl. II, fig. 9.)*

B. M. Payne Knight coll.; condition poor; wt. 113·2.

„ Thomas coll.; worn, but part of *obv.* legend remains; wt. 117. This seems to be the coin from Sahâranpur figured in A. A. XVIII, 2.

Freeling coll.; mentioned in *J. A. S. B. XXIV, 498*; wt. 115.

B.; three specimens; wt. not stated.

E. C. B., in good condition; *obv.* marginal legend seems to read वि or वी, one letter, जयत्यह the *h* at the end appears to me distinct; wt. 117·2.

A. C.; 1 specimen, no details stated.

Bush coll.; coin referred to in *J. A. S. B. XXIV, 499*, as appearing "to vary the *obv.* legend, but too much worn to be satisfactorily deciphered." Wt. not stated.

C.; obtained at Lucknow; *obv.* legend very imperfect; wt. 117.

Thomas describes the horse as 'richly bedecked,' or 'decked for the Aśwamedha sacrifice,' but in reality the animal wears nothing but a collar, and in the poorer specimens that has disappeared. The coins of this type are referred with confidence to the reign of Samudra, because (1) the obverse legend '*pṛithivi[m] jiyatya*' recalls the phrase '*sarvva pṛithivi*

vijayanitodaya' of Samudra's Allahabad Pillar inscription, (2) the ध्व under the horse is found on the footstool on the obverse of the same prince's Lyrist coins, (3) the epithet '*parákrama*' on the reverse is found on his Javelin and Archer coins and not on those of any other Gupta king, and (4) Samudra is known to have enjoyed power sufficient to warrant him in celebrating an Aśwamedha sacrifice.

Quære, is the standard in front of the horse the standard of Indra?

SAMUDRA GUPTA.

Tiger Type.

(Class H. of Revised Catalogue.)

Obv. King standing to r. wearing tight Indian waistcloth, turban, necklace, armlets, and large earrings, trampling on body of tiger, which is falling backwards, while he shoots it in the mouth. Bow in king's r. hand, his l. is raised above shoulder. Between king's feet a letter (?)

Legend on r. margin व्याघ्र ... 'the tiger' ... Thomas completes it with the word पराक्रमः 'hero,' but the letters are really very imperfect and dubious.

Rev. Goddess to l. standing on a dragon or marine monster which faces l. grasping in her r. hand a crescent-tipped standard adorned with pennons, resembling that on *obv.* of Boy and Battle-axe coins of Samudra, and in l. hand an expanded lotus-flower.

In field to r. राजासमुद्र गुप्तः, 'Rájá Samudra Guptaḥ.' No monogram. Wt. of one coin 116·6.

References and Remarks. B. M. unique; described in Rev. Catal.; described and figured in Records, p. 21, and Autotype Plate, fig. 2. (*Plate II, fig. 10.*) In Hindu mythology the dragon (*makara*) is the vehicle both of Varuṇa, the god of the waters, and of Káma Deva, the Indian Cupid. Perhaps the goddess on this coin represents Rati, the wife of Káma Deva, or, more probably she may be intended as the consort of Varuṇa, with reference to the name of the king, Samudra, which means 'the ocean.'* Thomas notes that a similar monster is to be seen under the feet of a statue found at Nongaṛh, and made of Mathurá sandstone.

SAMUDRA GUPTA.

Boy and Battle-Axe Type.

(J. A. S. B. XXIV, pp. 496-7, class C 2: Rev. Catal. classes F and 2 F.)

Obv. King standing, usually to l., with r. hand on hip, and l. resting on battle-axe. In l. field a boy holds in front of king a

* *Cf.* the introduction of Demeter in the coins of Demetrius of Syria. The form of the creature on which the reverse goddess stands is not very distinct, and Prof. Gardner thinks it more like the head of an elephant than anything else.

standard bearing device of crescent moon. Under king's l. arm स मु द्र, 'Samudra. In var. γ, king is to r., and boy in r. field

Marginal legend in vars. α and γ, as "obtained from several specimens, and determined by Major Bush's coin," is कृतान्त परशु राजधिराज, "King of kings, whose battle-axe is like that of Yama"; but in var. β legend is different.

Rev. Throned goddess, facing front, with feet on lotus flower as footstool; fillet in r. hand, cornucopia in l. arm. Legend कृतन्त परशु, 'the battle-axe of Yama.' Mon.

References and Remarks.

Var. α; *usual type, as described above.*

P. E. XXIII, 23; B. M., Prinsep; obtained by Conolly at Kananj; above crescent standard a star; on *rev.* an axe-head attached to back of throne; mon. 6*a*; wt. 116·7.

P. E. XXIX, 11; one of two specimens obtained by Cunningham at Benares, Prinsep had a third similar; mon. 6*a*. nearly; wt. not stated.

B. M., Thomas; no rev. battle-axe, throne indistinct; mon. as in P. E. XXIX, 11; wt. 117·0.

B. M., Bush; *rev.* as in B. M. Thomas, but legend distinct; mon. 6*a*; wt. 123·4. (*Plate II, fig. 11.*)

A. S. B.; no details stated, and the coin *may* belong to another variety.

A. C.; 1 specimen, seemingly of this var., but no details stated.

Var. β, *class 2 F of Rev. Catal.; unique.*

B. M., Eden; *obv.* legend on l. margin जजतज, and on r. margin कृतन्तप; under arm कृ 'Kṛi'; mon. 3*a*; wt. 117·7. (*Plate II, fig. 12.*)

Var. γ; *unique; King to r.*

A. A. XVIII 10; from Swiney coll.; king to r., boy in r. field; no *rev.* battle-axe; mon. 3*a*; wt. not stated.

Thomas suggests that the miniature figure, which for convenience I call a boy, may be intended for the son of Samudra Gupta, alluded to in the Allahabad Pillar inscription, but the figure is probably only that of an attendant designed on a small scale in contrast with that of the divinized king. The *obv.* crescent moon standard is found on *rev.* of Samudra's Tiger type. In v. 13 of the Allahabad Pillar inscription the king is declared to be comparable with Dhanada (Kuvera), Varuṇa, Indra, and Antaka (Yama). These Boy and Battle-axe coins seem to express the comparison with Yama, as the Tiger coin perhaps expresses the comparison with Varuṇa. In the northern Bilsaṛ inscription (*Cunningham Arch. Rep. XI,* 20), Kumára Gupta is compared with the same four

gods to whom Samudra Gupta is likened in the Allahabad inscription, and he is given the title of "wielder of the battle-axe of death." The use of this epithet convinces me that in the Boy and Battle-axe coins Samudra Gupta is presented as the incarnation or representative on earth of Yama or Kṛitánta, the god of Death, who was also regarded as the 'king of justice, (*dharmmarája*). In order of time this type should, perhaps, be placed before the Aśwamedha and Tiger types, which are more distinctively Hindu.

CHANDRA GUPTA II.

Couch Type.

(*Rev. Catal., class E a.*)

Obv. King seated on couch, with r. leg tucked up; attitude nearly the same as in Lyrist type of Samudra, but there is no lyre; king's l. hand rests on couch, r. hand upraised, empty; marginal legend (a few letters being indistinct), देव श्री महाराजाधिराज श्री चन्द्र गुप्तस्य, '[coin of the divine king of kings, Chandra Gupta.'] *Cf.* legend of Archer type.

Rev. Goddess seated on throne, holding fillet in r. and flower in l. hand. Monogram. Legend श्रीविक्रमः 'Sri Vikrama.'

References and Remarks. B. M.; coin unique, so far as is known; worn, wt. 114·7; mon. (3*a*) (*Pl. II, fig.* 13).

Assigned to Chandra Gupta II on account of *rev.* legend, and the title of 'Deva;' probably belongs to an early period of his reign. The Sánchi inscription (*P. E. I, 246; etc.*) states that Chandra Gupta II was 'known among his subjects' as Deva Rája; his son Kumára in a Horseman to Right coin (*A. A. XVIII*, 16) describes himself as 'Devnjanita,' the son of Deva, or 'the divine,' and himself assumes the title of 'Deva' in an unpublished gold Archer coin (*Rev. Catal., class 6 E b*), and in some of his silver 'peacock' coins.

Genl. Cunningham informs me that this coin, or one like it, is figured in a book entitled Oriental Collections (4to.), Vol. 2, p. 425, Pl. A. fig. 2,) but I have not seen the book referred to.

CHANDRA GUPTA II.

Archer Type.

(*J. A. S. B. XXIV, p.* 499, *class C* 1; *Rev. Catal., class E and* 2 *E.*)

Obv. King standing, wearing tailed coat, ordinarily turned to l., his l. hand grasps and rests on bow, of which the string is ordinarily turned inwards; arrow in r. hand, and bird-standard behind r. arm. Under l. arm च्द्र 'Chandra.'

In var. δ of Class II, king faces r., with bow in r. hand, and name under r. arm; in var. ε, he faces r., with bow in l. hand.

In var. β either a wheel or uncertain object over king's r. shoulder. Marginal legend, restored, देव श्री महाराजाधिराज श्री चन्द्र गुप्तः 'the divine king of kings, Chandra Gupta.' *Cf.* legend of Couch type.

Rev. Goddess, facing front, and seated either on throne (*Class I*), or cross-legged on lotus-flower (*Class II*), holding in r. hand a fillet, and in l. either a cornucopia or lotus-flower. Legend श्री विक्रमः, 'the hero'; the क is sometimes doubled. Mon.

Class I.—Throne Rev.

References and Remarks.

Var. α; *bow-string inwards.*

P. E. XXIII, 18; dug up at Jaichandra's Mahal, Jaunpur, by Tregear, along with Samudra's Archer coin. (*P. E. XXIII*, 19); cornucopia in l. hand of *rev.* goddess; mon. 21; wt. not stated.

A. G.; mon. 16; wt. 113·2; from Oudh.

A. C.; 1 specimen, seemingly of this var., no details stated.

P. E. XXIX, 13; "a very perfect example from Cunningham's cabinet, procured at Mirzápur;" flower in l. hand of *rev.* goddess; mon. 3*a*; wt. not stated. The B. M. Prinsep coin belongs to Class II.

C.; from Cawnpore (?); wt. 118·90.

Var. β; *bow-string outwards.* (*Class 2 E of Rev. Catal.*)

Marsden, MLVII; *rev.* goddess holds cornucopia; mon. 23; wt. 118.

I. O., No. 8; corresponds closely with Marsden's coin, but mon. 4*c*; *obv.* legend देव श्री महाराजाधिराज; wt. 120·9. This is probably the coin from Barhal in Gorakhpur, with same *obv.* legend. (*See J. A. S. B. XXIV, 499.*) *Plate II, fig.* 14.

Class II.—Lotus-flower seat Rev.

Var. α; *usual type, as described above; king to l.*

P. E. XXX, 9; from Tregear coll.; flower in l. hand of *rev.* goddess; mon. 22; wt. not stated.

No. 2 of Tod's 4th series; as above; mon. 8*b*; wt. not stated. (*Tr. R. A. S. I. Pl. XII.*)

Bharsar hoard, No. 1 of of Chandra Gupta; as above; mon. 8*a*; wt. 124; a duplicate weighed 126. (J. A. S. B. XXI, 394-5, 400.)

ditto, No. 5 ditto; mon. 8*a*; wt. 112.

As. Res. XVII, Pl. I, 13; from drawing of a coin belonging to Col. Willoughby of Patna; mon. 8*b*; wt. not stated.

Marsden, ML; mon. 20*a*; wt. 124·5; two *k*s in *rev.* legend.

B. M., Brind; mon. 10*a*; wt. 117·8.

B. M., Prinsep ; mon. 3*b* ; wt. 121·7.
„ T. ; mon. 8*b* ; wt. 126·3.
B. M., Yeames 4 ; mon. 8*b* ; wt. 124·7.
„ „ 5 ; mon. 1*b* ; wt. 119·2.
„ „ 6 ; mon. 10*a* ; wt. 121·8.
„ Eden ; mon. 7*a* ; wt. 124·3 ; two *k*s in *rev.* legend ; a fine specimen. (*Pl. III, fig.* 1.)
„ Swiney ; mon. 10*b* ; wt. 124·6 ; two *k*s ; fine condition.
I. O. No. 3 ; mon. 24 ; wt. 125·5.
„ „ 4 ; mon. 3*b* ; wt. 123 ; two *k*s ; fine condition ; is probably the coin figured in A. A. XVIII, 4.
„ „ 5 ; mon. 24 ; wt. 127·6 ; two *k*s.
„ „ 6 ; mon. 8*a* ; wt. 119·7 ; ditto.
„ „ 7 ; mon. 17*a* ; wt. 126·5 ; ditto.
W. T. ; mon. imperfect ; wt. 120.
A. S. B. ; 8 specimens ; mon. of all *seems* to be 8*b* ; wts. not stated. In 3 coins the l. hand of *rev.* goddess is described as being upraised, and in 5 coins as resting on her hip ; probably the lotus-flower is obliterated. A ninth specimen is said to be of base metal, and is probably one of the barbarous coins.
A. C. ; 5 specimens, seemingly of this var., no details stated.
Húgli hoard ; 4 coins seem to belong to this variety ; of three the mon. is 19*b*, and of one, 19*a* ; wts. not stated.
Coin from Rewa treasury ; apparently of this variety, with two *k*s. (*Proc. A. S. B. Aug.* 1880.)
H. ; 1 specimen, from ancient mound in Barabanki district.
C. ; from Gházípur ; wt. 118·60.

This variety of Chandra Gupta's coinage is the commonest of all the Gupta gold coins, and was the model followed by the princes who imitated the Gupta style after the fall of the imperial dynasty. The abundance and variety of the coins of Chandra Gupta II prove that his reign was a long one.

Var. β ; *as var.* α, *but with wheel* (*or sometimes another object*) *over king's r. shoulder ; weight heavier.*

Bharsar hoard, No. 2 of Chandra Gupta ; mon. 15 ; wt. 130 ; a duplicate weighed same. (*J. A. S. B. XXI, p. 394, Pl. XII. 1.*)
I. O., No. 9 ; mon. 18 ; wt. 132·5 ; (*Plate III, fig.* 2.)
„ „ 10 ; mon. 17*b* ; wt. 132·5.
„ „ 11 ; mon. 8*a* ; 126·6 ; worn.
„ „ 12 ; mon. 8*b* ; wt. 126·7 ; ditto.
„ „ 13 ; mon. 8*a* ; wt. 129·5 ; ditto.
A. G. ; uncertain object instead of wheel ; mon. cut away ; wt. 130·4 ; *k* in *rev.* legend seems double ; oval and rather rude coin ; from Oudh.

Perhaps A. A. XVIII, 21, from Kálighát hoard should be placed here, but the wt. is not stated. A coin from the Húglí hoard with uncertain object on *obv.*, and a peculiar mon. on *rev.* may also belong to this var., but without knowledge of the wt., it is impossible to decide. Kittoe interprets the wheel on the Bharsar coin as the "wheel or discus emblem of universal sovereignty," but I prefer to regard it as a solar emblem; it much resembles the head of Ghaṭot Kacha's solar standard. I should think that this variety belongs to a late period of Chandra Gupta's long reign, and it may possibly be posthumous. The weight separates it sharply from all his other issues, except the next following variety.

Var. γ; *as var.* β, *but wheel is replaced by crescent.*

Bharsar hoard; No. 3 of Chandra Gupta; mon. 8*a*; wt. 126; a duplicate weighed the same; coin small; gold pale and alloyed; (*J. A. S. B. XXI, Pl. XII, 2.*)

Var. δ; *king to r., bow in r. hand, name under r. arm.*

Bharsar hoard; No. 4 of Chandra Gupta; mon. 8*a*; wt 112; small coin, gold pale. (*J. A. S. B. XXI, Pl. XII, 3.*)

I. O., No. 1; mon. 8*a*; wt. 118·4; worn. (*Plate III, fig. 3.*)

Var. ε; *king to r., bow in l. hand, name under l. arm.*

I. O., No. 2; mon 4*c*; wt. 122·3.

Coin from Bulandshahr; mon. and wt. not stated (*Proc. A. S. B. April*, 1879). A coin in the A. S. B. cabinet seems to belong to this var., and may be the Bulandshahr specimen.

For the heavy 'barbarous' coins of Archer type, see Supplement.

CHANDRA GUPTA II.

Lancer Type.

(*J. A. S. B. XXIV*, 499, *class F*; *Rev. Catal., class J.*)

Obv. King on prancing horse, proceeding to r., with lance at charge, either helmeted, and without nimbus, or bareheaded with curly hair, and nimbus; sometimes a crescent behind his head.

Legend, as read by Thomas, परम भग जा श्री चन्द्र गुप्तः 'parama bhaga[vato rá]já Srí Chandra Gupta;' but in the B. M. specimens the ग and जा are very doubtful.

Rev. Goddess, to l., seated upright on Indian wicker stool (*moṛhá*), with fillet in r. and either lotus-flower, or bird-headed sceptre in l. hand. Legend always अजित विक्रमः, 'the unconquered Vikrama,' *or* 'champion.

No mon., except in one coin.

References and Remarks.

Variety α. *Rev. goddess with fillet, and flower; no mon.*

P. E. XXX, 6; from Tregear coll.; king helmeted; no nimbus; crescent behind his head; wt. not stated.

B. M. Prinsep, No. 1; obtained by Bacon at Kanauj; king seems to have no helmet, but has curly hair, with a sort of nimbus behind; crescent also behind his head; wt. 119·7. (*Plate III. fig. 4.*)

B. M. Prinsep, No. 2; resembles No. 1, but find-spot not stated; wt. 118·6.

A. C.; 1 specimen, seemingly of this var., but no details stated; the coin may be a Horseman to Left piece.

Variety β; *Rev. goddess with fillet, and bird-headed sceptre; mon.*

A. A. XVIII, 17; *Obv.* king wears peculiar helmet ("rayed turban," *Wilson*); no nimbus, no crescent; legend परम ...न्द्र गुप्त, 'parama [Cha]ndra Gupta.' *Rev.* as in P. E. XXX, 6, except that goddess holds bird-headed sceptre in l. hand; mon. 12, not No. 160 of Wilson = (4b) as stated in text; between mon. and goddess' hand is a crescent, ☾; wt. not stated. This coin is cited by Thomas (*Rev. Catal. and Records, p. 23 note*) as a variety of his class J *a* of Mahendra Gupta, but is plainly a Lancer coin of Chandra Gupta.

B.; one fine specimen appears to belong to either variety of the type, but details not stated.

CHANDRA GUPTA II.

Horseman to Left Type.

(Not included in J. A. S. B. XXIV catal.; nor in Rev. Catal.)

Obv. Horseman proceeding to l. king's head apparently bare, with curly hair, no nimbus; distinct legend श्रीचन्द्र गुप्तः परमभट्टारक 'Srí Chandra Gupta paramabhaṭṭáraka.'

Rev. Goddess to l. seated on Indian wicker stool (*moṛhá*), holding fillet in r., and lotus flower in l. hand; legend distinct, अजित विक्रम, 'ajita Vikrama'; no mon.

References and Remarks.

No. 6 of Chandra Gupta from Bharsar hoard; "a very perfect specimen," legends complete; wt. 122 (*J. A. S. B. XXI, 395; Pl. XII, 4.*)

No. 3 of Mahendra (?) ditto; *obv.* legend incomplete, and not deciphered; *rev.* legend अजित ... 'ajita'. This coin evidently should be assigned to Chandra Gupta; in the Horseman to Left coins of Kumára Gupta Mahendra the rev. goddess is feeding a peacock. Wt. 124. (*J. A. S. B. XXI, 399.*)

W. T.; *obv.* legend not read; *rev.* legend and device as in *J. A. S. B. XXI, Pl. XII, 4*; wt. 122.

CHANDRA GUPTA II.

Lion-Trampler Type.

(*J. A. S. B. XXIV, p.* 501, *class G* 2; *Rev. Catal., class K b.*)

Obv. King, wearing waistcloth, standing in energetic attitude, shooting in mouth a lion, which, in vars. α, β, δ, is falling backwards with the king's l. foot on its belly. In var. γ, the lion is standing with the king's l. foot on its back.

In vars. α, β, γ, king is turned to r., with bow in l. hand, but in var. δ, he faces l., with bow in r. hand.

Legend not deciphered, but, in var. δ, it includes the words 'Vikrama ... Gupta.'

Rev. Goddess, seated cross-legged, facing front, on couchant lion, which faces l., holding fillet in r., and lotus-flower in l. hand; but, in var. β, she sits astride, holding lotus-flower in r., while l. hand is empty.

Legend in all var., सिंह विक्रमः, 'the lion-champion.' Mon. generally, except in var. β.

References and Remarks.

Var. α; *king to r., bow in l. hand, trampling on lion's belly; rev. goddess cross-legged, facing front.*

P. E. XXX, 1; mon. 8a; wt. not stated; from Tregear coll.

No. 3 of Tod's 4th series; mon. 8b; wt. not stated. (*Trans. R. A. S. I., Pl. XII*).

A. A. XVIII, 5 = B. M., Swiney 5; mon. 10c; wt. 115·4; erroneously described by Wilson. (*Plate III, fig. 5.*)

W. T.; mon. 7b; wt. 122.

A. C.; 2 specimens, "king killing lion," but no details stated, and the coins may not belong to this var.

B.; one specimen, belonging either to this variety, or to β, or γ; details not stated.

Var. β; *obv. as in* α; *rev. goddess astride on lion, with lotus-flower in r. hand, l. hand empty.*

E. C. B; no mon.; wt. 118·2; worn.

Var. γ; *king to r. with foot on back of lion, which stands with head turned round.*

P. E. XXX, 2; mon. 10b; wt. not stated; fillet on *rev.* not visible; design spirited, and well executed; from Tregear collection.

Var. δ.; *king to l., with bow in r. hand, trampling with r. foot on lion's belly.*

P. E. XXIII, 27; mon. 4c; wt. not stated; *obv.* legend, as engraved, and as read by Prinsep, विक्रम नराज म गुप्तः 'Vikrama narána ma Gupta,' but there must be some error. Erroneously described by Prinsep as a "sorry duplicate" of P. E. XXIII, 25 (Retreating Lion type), which is a very different coin. From Stacy collection.

B. ; two specimens.

No. 4 of Tod's 4th series ; mon. seems to be 20a ; wt. not stated ; *obv.* legend includes certainly विक्रम, 'Vikrama.' (*Trans. R. A. S. I.* (*1827*). *Pl. XII.*

C. ; in *obv.* legend . . नरा '. . narā' . . legible, so far confirming Prinsep's reading ; no mon. ; wt. 122·00 ; obtained at Benares. Perhaps the true reading is नरोत्तम, 'best of men' ; *cf.* Ghaṭot Kacha. Mr. Carnac also has a coin obtained at Benares with . . तवस . . 'tavasa' on *obv.*, and *rev.* lion to right ; wt. 120·45. I omitted to note further particulars, and the coin is perhaps of the combatant Lion type.

Mr. Thomas (*J. A. S. B. XXIV p.* 501, *class G* ; *Rev. Catal., class K*) briefly describes as follows a coin in the Stacy collection, which he regards as being "a cast from a genuine original. *Obv.* king to r. armed with bow, shooting a lion ; legend श्रीमद विक्रम कुमार [गुप्तपरिधि] श्रीमद महेन्द्र, 'Kumára Gupta, of might like a lion's, most prosperous.' *Rev.* Párvatí seated on a lion, her r. hand extends the fillet, the l., which rests upon her knee, holds a flower ; legend सिंह महेन्द्र, 'Sinha Mahendra ;' wt. 126 ; type P. E. XXX, 1." If this cast represents a genuine coin it is a most important document, as proving that both the titles 'Sinha Mahendra' and 'Sinha Vikrama' belong to Kumára Gupta. But I think it probable that the cast is a forgery.* The combination of titles has no parallel in any authentic coin, and the legend has the appearance of having been composed to solve the difficulty felt in assigning the 'Sinha Vikrama' coins. In the genuine Lion-Trampler coin of Kumára's (*P. E. XXX*, 8) the rev. legend is 'Srí Mahendra Sinha ;' in the cast the word 'Sinha' is made to precede 'Mahendra.' Mr. Thomas, in his original catalogue (*J. A. S. B. XXIV*, 501) and in his Revised Catalogue assigns all the 'Sinha Vikrama' coins to Kumára Gupta, being apparently led to this conclusion by the dubious Stacy cast. In his Records of the Gupta Dynasty (*p.* 22) he attributes the B. M. unique Retreating Lion coin with 'Sinha Vikrama' legend, (*P. E. XXIII*, 25) to Samudra Gupta. He does not state any reason for this attribution,

* In a letter, written in May 1883, Mr. W. Theobald tells me :—"There is a roaring trade just now doing in forgeries. Just before I left India, two years ago I saw upwards of 33 beautifully executed forgeries of gold coins with one man in Hazára, and, what is more curious, I actually saw forged *copper* coins, but these only once in an out-of-the-way village, and the same man had a few forged silver Sophytes, one of which I bought ; but I have a genuine one also."

but it seems to be based on the similarity in design and execution between the coin in question, and Samudra's unique Tiger coin. But this similarity is not sufficient to outweigh all the other evidence. The Lion-Trampler coin (*P. E. XXX*, 8) with rev. legend 'Sri Mahendra Sinha' is undoubtedly Kumára's, for no one has ever supposed that the title Mahendra was shared by Samudra with Kumára. The Combatant Lion coins (*P. E. XXIII*, 28 *etc.*), which bear on the reverse the name in full of Kumára Gupta also resemble in obverse device the Tiger coin of Samudra, quite as much as the 'Sinha Vikrama' coins do. We know for certain that 'Vikrama' was a favourite title of Chandra Gupta II, and, after full consideration of the problem, I have no hesitation in concluding that General Cunningham (*Arch. Rep. X, III*), is right in assigning all the 'Sinha Vikrama' coins to Chandra Gupta II.* The result is that both Chandra Gupta II and Kumára Gupta must be credited with having issued coins both of the Lion-Trampler and Combatant Lion types, while the unique Retreating Lion coin must be assigned to Chandra Gupta II. Prinsep, with his usual acuteness, observed on the close similarity between the mintages of Kumára Gupta and his father Chandra Gupta II.

CHANDRA GUPTA II.

Combatant Lion Type.

(Not included in either of Mr. Thomas's catalogues.)

Obv. King, standing to r., in attitude less energetic than that of Lion-Trampler type, bareheaded, with bow in l. hand, shooting lion in mouth, but not trampling on its body. Sometimes, above king's l. arm, and in front of his face, a character 'h'? Legend of about 20 characters, including perhaps, ... रत चन्द्र, '... rata Chandra'?

Rev. Goddess, holding fillet in r., and lotus-flower in l. hand, seated, facing front, cross-legged on back of lion couchant to l. Legend श्री विक्रमः, 'Srí Vikrama'; the k is sometimes doubled. Coins poorly designed and executed. Mon.

References and Remarks.

E. C. B.; on left *obv.* margin 6 or 7 character, not read, on r. रत चन्द्र, 'rata Chandra'?; character before king's face; mon. 8b; wt. 120·9.

B. M. Swiney 4; no character before king's face; mon. 10c; wt. 111·4. (*Plate III, fig. 6.*)

A. G.; *obv.* legend of about 20 characters; mon. 10c; wt. 117·4; from Oudh.

* In his latest publication on the subject (*Epoch of the Guptas, p. 24, from J. R. A. S. for 1880*) Mr. Thomas refers to the reign of Chandra Gupta II both the Sinha Vikrama and the Vikramáditya coins. The late Sir E. C. Bayley concurred in this assignment.

The same character, in the same position before the king's face, is found in Kumára Gupta's Archer type, class I, var. β; its meaning is not known.

CHANDRA GUPTA II.

Retreating Lion Type.

(*J. A. S. B. XXIV*, 501, *class H*, 1; *Rev. Catal., class L.*)

Obv. King standing to front, head turned to l. wearing tight waistcloth, armlets, large earrings, and necklace; hair braided or curled, perhaps covered by a close cap. He holds in r. hand bow, and in l. an arrow pointed downwards, having just discharged arrow at retreating lion, which occupies l. margin, and in whose snout the arrow-head is sticking. Legend on r. margin महाराजधिराज श्री, 'Mahárájádhirájá Srí.'

Rev. Goddess (Dúrgá ?) seated on couchant lion, which faces l.; in her r. hand fillet, and in l. which rests on her hip, a lotus-flower. Her r. leg is tucked up under her, the l. hangs down behind the lion's rump. Legend श्री सिंह विक्रमः, 'the lion champion'; vertical line between device and legend. Mon.

References and Remarks. Unique coin; P. E. XXII, 25, and Vol. I. pp. 27 and 280; Records. p. 22 and Autotype Pl. fig. 8; in B. M.; obtained at Kanauj by Lieut. Conolly; mon. 4c; wt. 123. A broad coin of artistic design, and spirited execution. (*Plate III, fig. 7.*) For discussion of question of attribution see remarks under Lion-Trampler type of Chandra Gupta II.

CHANDRA GUPTA II.

Swordsman and Umbrella Type.

(*J. A. S. B. XXIV*, 492, *class A* 1; *Rev. Catal., classes B and* 2 *B.*)

Obv. King standing, facing l., bareheaded, with long curly hair, with l. hand resting on short sword (*khaṇḍa*), and with r. hand casting incense on small altar, which is, however, sometimes wanting. Beside king's l. arm a miniature figure holding handle of state-umbrella, which shades the king. Marginal legend, restored from comparison of specimens, विक्रमादित्य क्षितिमवजित्य सुचरति, 'Vikramáditya, having conquered the earth, prospers.'

Rev. Standing female figure (? Victory, *Wilson*), either full front, or facing l. with fillet in r. hand, and sometimes a flower in l.: her dress slightly varies in different coins.

Legend विक्रमादित्य 'Vikramáditya,' sometimes spelled with two *k*s. Monogram sometimes wanting.

References and Remarks.

P. E. Vol. I, 372, Pl. XXX, 7; from Tregear coll., and at that time unique; no altar on *obv.*; one *k* in *rev.* legend; no mon.; wt. not stated.

A. A. XVIII, 1; from E. I. C. coll. but not now in I. O.; no obv. altar; no flower in l. hand of *rev.* goddess, but a knobbed staff behind her; double *k* in *rev.* legend; no mon.; wt. not stated; more Indian in style than Prinsep's coin.

B. M., Eden No. 1; *obv.* altar partly visible, with incense falling on it; *rev.* in fine condition; open lotus-flower in goddess' left hand; no staff between her and legend, which has only one *k*; mon. apparently 8*b*; wt. 119·3. (*Plate III, fig. 8.*)

ditto, ditto, No. 2; poorer specimen; umbrella cut away; mon. imperfect; wt. 117·5.

B.; three specimens.

Freeling No. 1; *obv.* altar; *rev.* goddess holds flower in left hand; mon. No. 159 A. A., *viz.* 3*a*; two *k*s in *rev.* legend; wt. 121. (*J. A. S. B. XXIV, 492.*)

ibid, No. 2; *rev.* goddess full front, with transparent drapery; mon. resembling that of Ghaṭot Kacha's coin, P. E. XXIX, 12, but with double crossbar; one *k* in *rev.* legend; wt. 121. (*ibid, class 2 B.*)

These coins are ascribed by Thomas to Chandra Gupta I, and are so classed in B. M., but are ascribed by Cunningham to Chandra Gupta II, and in this attribution the late Sir E. C. Bayley concurred. The design of the *rev.* rather favours the former supposition, but the king's curly hair, and the obv. legend, which is nearly identical with that on Kumára's unique Swordsman coin, are in favour of the latter. The reduplication of the *k* in the rev. legend of some of the coins in question is also found in Chandra Gupta II's Archer coins. The average weight is consistent with the attribution of these coins to either prince. Considering the fact that Chandra Gupta II in his silver coins used the titles Vikramáṅka and Vikramárka as well as Vikramáditya, I have no doubt that these gold coins with the title of Vikramáditya should be referred to him. This title is also found on one of the heavy coins of barbarous execution, bearing the name of Chandra, which is described in the Supplement. Mr. Theobald has a large copper coin (a duplicate of P. E. XXX, 11) with legend 'Mahárája Srí Chandra Gupta,' the obverse of which seems to be a rude imitation of these gold coins; wt. 71. Gen. Cunningham compares the *obv.* device with a sculpture, apparently of Gupta age, at Bhitarí in the Gházipur district. (*Arch. Rep. p.* 99.)

KUMÁRA GUPTA (MAHENDRA).

Swordsman Type.

(Rev. Catal., class D a.)

Obv. King, facing front, with long curly hair, wearing a cap or turban, short drawers, necklace, and armlets; with r. hand casting incense on small altar, which is partly visible; a short sword hangs from his waist, and his l. hand rests on his hip. Behind r. arm. bird-standard, adorned with pennons. Beside left elbow कु 'Ku,' with a crescent over the syllable. Legend on margin [चि]तिमवजित्य सुचरति कुमार, 'Kumára, having conquered the earth, prospers.'

Rev. Goddess, seated cross-legged on lotus-flower seat with fillet in r., and open lotus-flower in l. hand. Legend श्री कुमार गुप्त 'Srí Kumára Gupta.' Monogram.

References and Remarks. Unique coin in B. M. Prinsep coll.; described and figured in Records, p. 23 and Autotype Pl. fig. 5. The first two words are read गमव जित्य by Thomas, which is unintelligible: I read his ग as a त, with one limb a little prolonged—the remains of the चि are on the left margin; a crack crosses the व, but the letter is quite distinct the legend thus agrees with that on the Swordsman and Umbrella coins of Chandra Gupta II, father of Kumára. The crescent over the obverse कु is remarkable, because it is generally found only in the heavy debased coins of the type of Nára Gupta's coinage. The wt. 124·2 of the present coin indicates that it belongs to the genuine mintage of the imperial Kumára Gupta. The execution of the coin is clumsy, but not very barbarous. Mon. 8*b* (*Plate III, fig. 9.*)

KUMÁRA GUPTA (MAHENDRA.)

Archer Type.

(J. A. S. B. XXIV, 500, *class O* 1, *and varieties; Rev. Catal. classes 5 E b, 6 E b, 7 E b, and E c.)*

Obv. King, standing to l., head bare, hair curly, r. hand. extended across bird-standard, holding arrow; l. hand either resting on tip of bow with string turned inwards, or grasping middle of bow with string outwards.

Sometimes, but not always, कु 'Ku,' under l. arm.

Legend on margin, or in field, various, as detailed below.

Rev. In all vars.; goddess seated cross-legged on lotus-flower seat; and holding fillet in r., and lotus-flower in l., except in class II, where her hands are empty.

Legend श्री महेन्द्र, 'Srí Mahendra.' Mon.

Class I. String of bow turned inwards.

References and Remarks.

Var. **a** ; *obv. legend* **जयति महेन्द्र,** '*Mahendra conquers.*'

P. E. XXIX, 20 ; from Cunningham's coll. ; obtained at Gayá ; under king's arm **कु,** 'Ku,' apparently with crescent over it ; remains of a letter before his face ; mon. 25, slightly modified ; wt. not stated.

A. A. XVIII, 12 ; duplicate of above ; wt. not stated.

Bharsar hoard, No. 2 of Kumára Gupta ; as above ; mon. 25 ; wt. 123.

ditto, No. 4 of Kumára Gupta ; as No. 2, but no *obv.* legend except 'Ku' ; mon. 25 ; wt. 124·5. (*J. A. S. B. XXI, 397.*)

No. 1 of Tod's 4th Series ; as P. E. XXIX, 20, but legends on *obv.* indistinct ; mon. 20 *a* ; wt. not stated. (*Trans. R. A. S. I, Pl. XII.*)

B. M., Eden ; *obv.* legend not read ; mon. 8*b* ; wt. 124·7. (*Plate III, fig. 10.*)

„ Prinsep ; ditto ; worn ; wt. 106·7.

Communicated by E. C. B. ; two specimens found at Jhúsí near Allahabad along with eight of Peacock type of Kumára Gupta.

C. ; one specimen dug up near Allahabad along with a Peacock coin ; probably part of the Jhúsí find.

A. S. B. ; 3 specimens perhaps belong to this variety, but details are wanting ; one seems to have no. *obv* legend, two have **कु** 'Ku' under arm.

Var. **β** ; *obv. legend as stated below ; a character, seemingly,* '*h*,' *before king's face.*

A. S. B. ; figured in P. E. XXXIX, 19, and As. Res. XVII Pl. I, 14 ; a character between king's feet ; *obv.* legend, as read by Dr. Hoernle, 'Parama rájádhirája Srí [Kumára Gupta Mahen]dra,' but of the words in brackets only the lower portion is legible, and the restoration is conjectural ; wt. not stated.

For the character before the king's face, *cf.* the Combatant Lion type of Chandra Gupta II, this character seems to me to be 'h,' and not 'Gu.' The word 'parama' in the legend also recalls Chandra Gupta's Lancer and Horseman to Left types, but the 'Mahendra' of the *rev.* legend proves this coin to belong to Kumára Gupta.

Var. **γ** ; *under king's arm* **कु,** '*Ku*'? *obv. legend, as stated below.*

A. G. ; mon. 8*b* ; wt. 125 ; from Oudh. The *obv.* legend includes the letters ... **जतर** ... 'jatara.'

Var. **δ** ; *class 6 E b of Rev. Catal.* ; *obv. legend as below.*

Freeling coll. ; unpublished, briefly referred to by Thomas in his catalogues and in Records, p. 50 ; wt. 125. *Obv.* legend [रे]व विजितावनिरवनिपति कुमारो गुप्रो,

'the divine (*or* Deva) Kumára Gupta, lord of the earth, who has conquered the earth.' Some of the peacock type of the silver coins have the same legend, with the word जयति, 'conquers,' inserted after 'Deva.'

Var. ε; *obv. legends as stated below; class* 7 *E b of Rev. Catal.*

Stacy coll.; unpublished; briefly noticed by Thomas in his catalogues; wt. 126; no initial under king's arm; l. marginal legend कुमार गुप्त, 'Kumára Gupta.'

Var. ζ; *obv. legends as stated below.*

Coin from Mahanada; कु, 'Ku' under king's arm; *obv.* legend श्री महाराजाधिराज श्री कुमार गुप्त, 'Srí Mahárájádhirája Srí Kumára Gupta;' further details wanting. (*Proc. A. S. B. May, 1882, p. 91.*)

In J. A. S. B. XXIV, 500, Thomas refers to a cast coin in Freeling coll., which partially agrees with the Mahanada coin, but it is useless to discuss specimens of doubtful genuineness.

Class II.—String of bow turned outwards.

P. E. XXIX, 16; Cunningham coll., from Gayá; no initial under king's arm; कुमार, 'Kumára' outside bow-string; marginal legend म[हेन्द्र]; *rev.* goddess with both hands turned up, and elbows resting on knees; mon. 8c; wt. not stated; rude coin of irregular outline.

A. A. XVIII, 11; nearly identical with above; mon. 8*b*; wt. not stated; "a very rude coin."

B. M.; mon. 19*b*; wt. 121·4.

ditto; mon. 10*c*; wt. 119·5.

I. O.; mon. 10*c*; wt. 123·5. (*Plate III, fig. 11.*)

A. S. B.; one coin seems to belong to this variety.

Three coins from the Húglí hoard, with the several mons. 8*b*, 17*c*, and 17*d*, belong to the Archer type of Kumára Gupta, but, in the absence of details, I cannot classify them more exactly. A. C. has one specimen, which, for the same reason, cannot be placed. The variety in the imperfectly deciphered obverse legends of this type is remarkable; the Horseman coins of the same king exhibit a similar variety.

For heavy barbarous coins of Archer type see Supplement.

KUMÁRA GUPTA MAHENDRA.

Horseman to Right Type.

(*J. A. S. B. XXIV*, 502, *class F* 2; *Rev. Catal., class J a.*)

Obv. Horseman proceeding to r., bare-headed, with curly hair; no lance; in some cases an obscure character over horse's

head; sometimes a character, apparently वि 'vi,' between horse's legs; marginal legend, various, as detailed below, and generally imperfect.

Rev. Female seated to l., on Indian wicker stool (*moṛhá*) and (*a*) holding fillet in r. hand, and lotus-flower in l., behind her back; (*β*) holding in r. hand, a lotus-flower, springing from a curious undefined object, her left hand resting empty on hip; (*γ*) offering fruit to a peacock with r. hand, and holding lotus-flower in l.

Legend always अजित महेन्द्र 'the unconquered Mahendra.' Monogram generally wanting.

References and Remarks.

Var. **a**; *Reverse goddess sitting upright, holding fillet and flower.*

P. E. XXIII, 29; from Lt. Burt's coll.; obscure character, perhaps meaning 'Srí' over horse's head; traces of letter between horse's legs; *obv.* legend illegible; wt. not stated.

P. E. XXX, 4; as above coin; on r. *obv.* margin ... त वि ... 'ta vi,' legible; wt. not stated.

A. A. XVIII, 16; closely resembles P. E. XXIII, 26, but, as Thomas points out (*Records, p. 23 note*) the *obv.* marginal legend ends with ... गुप्त देवजनत, 'Gupta of divine origin,' *or* 'the son of Deva'; a character over horse's head; wt. not stated, 'Deva' was a title of Chandra Gupta II. A. A. XVIII, 17 cited by Thomas *(ut supra)* as a variant, is really a Lancer coin of Chandra Gupta II, *q. v.*

No. 5 of Kumára from Bharsar hoard; fillet not visible, coin being "much worn"; a character over horse's head; wt. 124·5; a duplicate weighed 125. (*J. A. S. B. XXI, pp. 398, 400; Plate XII, 8.*)

Húglí hoard; one specimen; *obv.* legend, as read by Dr. Hoernle, 'Parama bhagavata ... dhi rájá Guptaḥ'; rev. 'Ajita Mahendra'; mon. 8*b*. *Cf.* var. *γ*.

Variety β; Reverse goddess, stooping, holding in r. hand an open flower, stalk of which springs from an unknown object; her l. hand rests on hip.

P. E. XXX, 3; *obv.* legend अजित पु [*or* प्र] ... त विक्र; 'ajita pu [*or* pra] ... ta vikra[ma]'; from Tregear coll.; wt. not stated.

E. C. B.; *obv.* legend illegible; horseman seems to wear armour; wt. 126·5.

Variety γ; Reverse goddess feeding peacock with right hand, holding lotus-flower with left.

P. E. XXIII, 30; B. M.; *obv.* legend ... त महेन्द्र गुप्त and 8 or 9 letters, '[aji]ta Mahendra Gupta .....'; between horse's legs वि 'vi'; given to Prinsep by Miss Watson; wt. 124·5; worn.

Marsden, MLIX ; B. M. ; closely resembles above coin ; *obv.* legend महेन्द्र [?] गुप्त, 'Mahendra Gupta' ; traces of letter between horse's legs ; king has not "long-flowing" curls as stated in Records, p. 23 ; wt. 125·5.

P. E. XXX, 5 ; resembles last, but Prinsep read two letters of *obv.* legend as हय 'haya' ; wt. not stated.

A. G. ; from Oudh ; worn ; over horse's head a character, 'Srí'? ; between horse's legs वि 'vi' ? ; legend on right margin of ten characters, *viz.*, प ति रज ि, विज कु ; being part of the legend on the Midnapur Horseman to Left coin ; wt. 124.

B. M., Eden ; character 'Srí' ? over horse ; *obv.* legend विजय 'vijaya' on l. margin, and ... तव [or प] तर 'ta ba [*or* pa] ta ra' on r. margin, seemingly a part of the Midnapur Horseman to Left coin legend ; wt. 124·8.

B. M., Bush ; character over horse's head ; in *obv.* legend देव, 'Deva' legible ; *cf.* A. A. XVIII, 16 ; condition fine ; wt. 127·2. (*Plate III. fig. 12.*)

B. M., Yeames ; character over horse's head ; wt. 126·7.

B. M., ———— ; do. do. ; wt. 125·9.

B. M., E. T. ; worn, in poor condition ; no character over horse ; wt. 117·3.

B. M., Yeames ; character over horse's head ; wt. 124·7.

I. O., No. 1 ; character over horse's head ; worn ; wt. 124.

„ No. 2 ; character over horse's head ; under horse वि, 'vi' ? ; wt. 125·8.

„ No. 3 ; character over horse's head ; no letter under horse ; wt. 125·3.

A coin in A. S. B. cabinet with *obv.* legend 'Srí Maharájádhiráj' is said to belong to this type, but details are wanting.

Húglí hoard, one specimen ; *obv.* legend, as read by Dr. Hoernle, 'Paramá bhagavata ... Srí Ma[hendra Gu]pta ;' rev. 'Ajita Mahendra.' *Cf.* var. a.

H. ; 1 specimen from a place in pargana Nawabganj of Gonda district opposite Ayodhya : *obv.* legend 'Ajita Mahendra Gupta.'

KUMÁRA GUPTA MAHENDRA.

Horseman to Left Type.

(*J. A. S. B. XXIV*, 502, *class F*, 3 ; *Rev. Catal. class J b.*)

Obv. Horseman, bareheaded, with curly hair, proceeding to l., no lance ; sometimes a character (कु 'Ku' ?) over horse's head, or between its legs ; marginal legend imperfect and various, see details below.

Rev. Goddess seated, facing l. on wicker stool (*moṛha*), with r. hand feeding peacock, and with l. hand holding flower behind, her back. Legend अजित महेन्द्र 'the unconquered Mahendra. No monogram.

References and Remarks.

As. Res. Vol. XVII, Pl. I, 18. *Obv.*, legend illegible, between horse's legs कु 'Ku'?; wt. not stated; engraved "from a drawing of a coin said to belong to Mrs. White of Fatehgarh."

Freeling coll.; unpublished coin, briefly alluded to in Rev. Catal.; wt. not stated.

No. 1 of Mahendra from Bharsar hoard; *obv.* legend indistinct, but read by Kittoe as 'Mahendra Gupta'; wt. 124.

No. 2, ditto, ditto; nearly identical with No. 1 but 'Ku'? over horse's head, and long *obv.* legend, illegible; wt. 124 (*J. A. S. B. XXI, 399.*)

B. M. No. 1; wt. 126 (*Plate III, fig. 13.*)

" " 2; wt. 123·8.

" " 3, Enniskillen; wt. 123·2. These B. M. coins read on obv., ... वजत् जयति कु. *Cf.* Húglí coin below.

A. S. B. No. 1; from Shaurpur in Midnapur District, Bengal; *obv.* legend भूपति राजति विजय कुमार गुप्त, according to Cunningham, who compared with three specimens in his own possession, the प्त being written त्य. Dr. Hoernle reads धि राज क्षितिपति राजति विजय कुमार [गुप्त?] Either reading means 'the victorious lord Kumára Gupta rules.' The words विजय कुमार are between the horse's legs, and the word read भूपति, or क्षितिपति, or क्षत्रपति is round the horse's head and preceded by three letters, the last of which is distinctly ज. (*Proc. A. S. B. August 1882, pp.* 111-114). Dr. Hoernle informs me that he now reads ... धि राज instead of श्री राज as printed, and that the coin belongs to Horseman to Left type.*

A. S. B; No. 2; apparently similar, but no details stated.

Húglí hoard; one specimen; *obv.* legend as read by Dr. Hoernle; 'Gupta Kshapra mahá ... ma ... vijita jayati'; *rev.* 'Ajita Mahendra.'

A. C.; 3 specimens, details not stated; see above.

KUMÁRA GUPTA MAHENDRA.

Peacock Type.

(Omitted both in J. A. S. B. XXIV, and in Rev. Catal.)

Obv. King, bareheaded, with curly hair, standing to l. with r. hand offering fruit to a peacock, which stands facing r.

* The published account does not state whether the horseman is to right or left.

Marginal legend of from 10 to 14 characters, not fully deciphered; see details below.

In variety *α* the king stands upright, and the peacock's neck is extended full length.

In variety *β* the king is stooping, and the peacock's neck is not fully extended.

Rev. Goddess, probably Kumárí Deví, riding a peacock, holding mace or sceptre in l. hand, and sometimes a fillet in r. hand. Legend, as read by Gen. Cunningham, 'Mahendra Kumára'.* No mon.

In variety *α* peacock is turned to l. and shown in half profile, as is also the goddess; an altar in front of peacock.

In variety *β* peacock and goddess are facing front, and expanded tail of peacock fills whole field, as in the silver coins; no altar.

References and Remarks.

Variety *α., king upright; rev. profile peacock, with altar.*

A. A. XVIII, 13; from Swiney coll.; in *rev.* legend कु 'Ku' ... legible; wt. not stated.

B. M., Lind; *obv.* legend illegible; on *rev.* 'Srí ... Ku ...' seems distinct; wt. 128·4; the execution of this coin is very fine and delicate (*Plate IV, fig. 1*).

B. M., Nathan; legends not read; coin in good condition, but not so fine as the Lind specimen; wt. 126·5.

E. C. B. No. 3; found at Jhúsí near Allahabad, along with specimens of *β* variety, and of Kumára's Archer type; in good condition; *obv.* both l. and r. marginal legend, not read; *rev.* legend seems to include 'Srí Kum.'; wt. 128·6. No fillet in r. hand of goddess.

A. S. B.; wt. not stated.

C.; one specimen, ploughed up in a field in Allahabad District, with coin of Archer type; wt. 127·60.

A. C.; 1 specimen, found at Allahabad; no further details stated.

Variety *β*; *obv. king stooping; rev., peacock and goddess facing front; no altar.*

No. 3 of Kumára from Bharsar hoard; *obv.* legend read by Kittoe as 'Srí Kumára,' and *rev.* as 'Srímad Kumára', but doubtfully; goddess holds fillet and sceptre; wt. 124. (*J. A. S. B. IVI, 397, and Pl. XII, 7.*)

I. O.; wt. 126. (*Plate IV, fig. 2.*)

A. S. B; wt. not stated.

E. C. B. No. 1; *obv.* marginal legend of 10 or 11 characters, of which second and fourth seem to be respectively ति and त्य; *rev.* legend of 5 characters, the second being कु; wt. 128·2.

* I am indebted for this reading to a communication from Gen. Cunningham.

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E. C. B. No. 2 ; similar to No. 1, and found with it and No. 3 at Allahabad ; wt. 127·8.
The *rev.* legend, as in the other specimens of both varieties, seems to include कुम 'Kum ...' E. C. B. reads जयति '*jayati*' as the first word of the *obv.* legends.

A. G. *obv.* legend 14 characters on right margin only, read doubtfully as . तिव्यकु [or क्र] मा व्य
1 2 3 4 5 6
ह [or पु] रा च . र . . म ; *rev.* legend illegi-
7 8 9 10 11 12 13 14
ble ; r. hand of goddess empty ; wt. 127·6 ; from Oudh.

A. C. ; 1 specimen, found at Allahabad ; no further details stated.

C. ; wt. 127·50 ; obtained at Benares.

The prominence of the peacock in the design of these coins would alone be enough to prove that they must be referred to the reign of Kumára, and this conclusion is amply confirmed by the legends so far as read. Eight coins of this type, and two of Kumára's Archer type, were found together at Jhúsi near Allahabad about seven years ago ; three of this trove, as noted above, are in the E. C. B. cabinet, and the remaining 7 coins are in the hands of another collector.

A larger hoard found earlier at Allahabad is noticed in the Introductory Essay.

KUMÁRA GUPTA MAHENDRA.

Lion-Trampler Type.

(*J. A. S. B. XXIV.* 501, *class G, var.* 1 ; *Rev. Catal. class K a*).

Obv. King standing, to r., bareheaded, bow in l. hand, his l. foot trampling on body of lion, which is falling backwards ; no letter before king's face ; legend (in one coin) ...त महेन्द्र जय श्री, '[aji]ta Mahendra jaya S'rí.'

Rev. Goddess seated, facing front, on lion facing r., either holding fillet in r. hand with her l. hand resting empty on hip, or with her r. hand extended empty, and l. hand raised above shoulder, holding lotus-flower ; legend श्री महेन्द्र सिंह, 'S'rí Mahendra Sinha,' or श्री महेन्द, 'S'rí Mahendra :' monogram.

References and Remarks. *Variety a. Rev. goddess with fillet in r. hand, l. hand resting empty on hip.*

P. E. XXX, 8 ; obtained by Tregear at Jaunpur ; *obv.* legend as given above, the first letter is plainly त as read by Prinsep ; *rev.* legend 'S'ri Mahendra Sinha' ; mon. 8*a* ; wt. not stated.

Húglí hoard; one specimen; details wanting; rev. legend Śrí Mahendra Sinha.'

Variety β; reverse goddess with r. hand extended open, empty; l. hand raised, holding lotus-flower.

A. G.; bought in Bombay; *obv.* design almost the same as in P. E. XXX, 8; legend illegible; *rev.* legend श्री म[हेन्द्र], 'Śrí Ma[hendra?]; mon. 8*b* wt. 127·2.

The title Mahendra on these coins is sufficient to justify their ascription to Kumára Gupta. Two coins in A. S. B. cabinet appear to belong to this type; in one the reverse lion faces l., and in the other r., but, in the absence of detailed information, I cannot place the coins definitely.

KUMÁRA GUPTA MAHENDRA.

Combatant Lion Type.

(*J. A. S. B. XXIV*, 501, *class I*; *Rev. Catal., class H a.*)

Obv. King, standing to l., wearing crested helmet or peaked cap and Indian waistcloth, one end of which hangs loose between his legs; his l. hand uplifted; in r. hand he holds bow, having discharged arrow into mouth of attacking lion, of which only the forepart is visible on l. margin. Under king's l. arm कु 'Ku.' Marginal legend of 3 characters on l. margin, *viz.*, र[श or श्र]म 'ra śa [or śra] ma,' the म 'm' being certain; and 8 or 9 characters in r. margin ending in कु or क्र 'Ku, *or* 'Kra,' and beginning with श्री; Prinsep read श्री बल पराक्रमः, but this is not tenable; the letters look like श्री बषपल्लुरक्र.

Rev. Goddess (probably Kumárí Deví) standing, slightly stooping to l., with right hand feeding a standing peacock, which faces r., and with l. hand holding lotus flower. Legend on r. margin कुमार गुप्ताधिराज 'Kumára Guptádhiráj.' Monogram.

References and Remarks. No. 1 of Kumára Gupta from Bharsar hoard; *obv.* legend not read; *rev.* legend complete; mon. 8*a*; wt. 124·5 (*J. A. S. B. XXI, 397.*)

P. E. XXIII, 28; from Cunningham's collection at Benares; mon. as in Bharsar coin; *rev.* legend imperfect; wt. not stated.

Coin in Swiney coll.; of same type as P. E. XXIII, 28; *obv.* legend indistinct, but guessed by Wilson to be 'Vikrama Sinha'; *rev.* legend 'Kumára Gupta'; no further particulars stated. (*A. A. p. 423.*)

Coin exhibited at A. S. B; of *obv.* legend only śra [śrí?] má on l. margin; 'Śrí' on r. margin, and 'Ku' below

arm, legible ; *rev.* legend fairly distinct ; no further particulars stated. (*Proc. A. S. B. Feb. 1881.*)

I. O. ; wt. 126·1 ; *obv.* legend very imperfect. (*Plate IV, fig. 3.*)

It is to be hoped that some more perfect example of this rare type may be published, so as to throw light on the obverse legend. If Wilson's conjectural reading of 'Vikrama Sinha' on the Swiney coin should be confirmed, the use of the title 'Vikrama' both by Kumára Gupta and his father would be proved.

SKANDA GUPTA.

Archer Type.

(*J. A. S. B. XXIV*, 502, *class C* 1 ; *Rev. Catal. class E b.*)

Obv. King, standing to l., wearing tailed coat, hair curly ; l. arm resting on bow ; r. hand extended across bird-standard, and holding arrow ; under l. arm स्क 'Skanda.' Marginal legend

न्द

very imperfect, and not deciphered.

Rev. Goddess, seated cross-legged on lotus-seat, holding fillet in right, and flower in l. hand. Legend श्री स्कन्द गुप्तः 'Srí Skanda Gupta.' Monogram.

References and Remarks.

P. E. XXIX, 18 ; Cunningham coll., dug up at a village four *kos* (8 miles) from Gházípur ; mon. 3*a* ; wt. not stated.

P. E. XXX, 10 ; Tregear coll. ; mon. apparently same as in XXIX, 18 ; wt. not stated.

No. 1 of Skanda from Bharsar hoard ; mon. 3*b* ; wt. 129·25 ; two duplicates weighed 125 each.

No. 2 ditto, ditto ; mon. either 3*b* or 4*c* ; wt. 129·25 ; "a very perfect specimen ; gold indifferent."

No. 3 ditto, ditto ; a smaller coin ; mon. as in No. 2 ; wt. 130 ; a duplicate weighed the same. (*J. A. S. B. XXI, 398—400.*)

I. O., No. 1 ; mon. imperfect ; wt. 129·5.

ditto, „ 2 ; mon. 8*a* ; wt. 132·5 ; in *obv.* legend the letters जतम ... 'jatama ...' legible. (*Plate IV. fig. 4.*)

Coin from Mahanada ; mon. and wt. not stated. (*Proc. A. S. B. May 1882, p. 91.*)

A. G. ; in *obv.* legend जमत 'jamata' seems legible ; a letter between king's feet ; mon. 3*a* ; wt. 132·3 ; reverse poorly executed, from Oudh.

B. M. Brind ; *rev.* legend imperfect, but the weight induces me to place the coin here ; mon. 3*b* ; wt. 130·1.

For 'barbarous' coins of Archer type see Supplement.

SKANDA GUPTA.

King and Queen Type.

(*J. A. S. B. XXIV, p.* 502, *class J; Rev. Catal. class M.*)

Obv. Bird-standard, with pennons, in centre of field; king, bare-headed, with curly hair, standing in l. field, facing to r.; queen standing in r. field, opposite to king. King wears either a waistcloth (*dhotí*) or short drawers (*janghiyá*), and armlets, and with l. hand grasps middle of bow, the string of which is turned towards the standard. Queen wears Indian woman's waistcloth (*lahangá*), and in r. hand holds up an object, probably a flower. Legend very imperfect and illegible, but probably consisted of names of king and queen.

Rev. Goddess seated cross-legged on lotus-flower seat, holding lotus-flower in l., and fillet in r. hand.

Legend on r. margin श्री स्कन्द गुप्तः 'Srí Skanda Gupta.' Mon.

References and Remarks. B. M.; purchased at Kanauj by Mr. Bacon, and presented to Prinsep; mon. 3*a*; wt. 128·8. Prinsep erroneously read 'Chandra' on the reverse. This is the coin engraved in P. E. XXIII, 24; and in As. Res. Vol. XVII, Pl. I, 12. (*Pl. IV, fig. 5.*)

A. S. B.; no details stated.

I have identified the obverse figures as those of the king and queen on the analogy of the King and Queen type of Chandra Gupta I. The name of Skanda Gupta's queen is not known.

SUPPLEMENT.

Doubtful.

CHANDRA GUPTA II?

Archer Type.

Obverse and reverse devices as in Archer Type, class II *a* of catalogue, but execution debased, and weight exceeding 140.

References and Remarks. Marsden MLI; in B. M.; च न्द्र 'Chandra' under king's left arm, with a crescent ◡ over the word; 'bhi'? between his legs; *rev.* legend seems to be श्री विक्रमादित्य 'Srí Vikramáditya'; mon. 19*a*; wt. 148.

Marsden MLVI; in B. M.; resembles MLI, but rev. legend seems to be श्री देव ...'Srí Deva' ...; mon. indistinct wt. 144·5. (*Plate IV, fig. 7.*)

A. G.; *rev.* legend श्री विक्रम, 'Srí Vikrama'; mon. imperfect; wt. 144.5; of alloyed metal, from Oudh.

KUMÁRA GUPTA MAHENDRA (?)

Archer Type.

Obv. and *rev.* devices nearly the same as in Archer Type, class I of catalogue, but execution debased. *Rev.* legend श्री महेन्द्र, 'Śrí Mahendra'; कु 'Ku' under *obv.* king's arm; wt. exceeding 140.

References and Remarks.

Marsden, MLII; in B. M.; mon. 8a; wt. 147·0.

ditto, MLIII; *ibid.*; mon. imperfect; wt. 146·5.

B. M., Yeames; mon. imperfect; wt. 143.

„ R. P. K.; ditto, do.; wt. 148·7. (*Plate IV, fig. 8.*)

A. C. XVIII, 23; one of the Kálighát hoard; supposed by Cunningham (*Arch, Rep. III*, 137) to be a coin of the Kumára Gupta of Magadha mentioned in the Aphsar inscription.

B. M.; ten specimens, apparently of base metal, and very coarsely executed; av. wt. 148·5; the detailed wts. are —— 150·3; 150·2; 147·8; 150·2; 150·6; 147 146·8; 146; 149·2; 147·2.

A. C.; 2 specimens, no details stated.

Doubtful.

SKANDA GUPTA KRAMÁDITYA.

Archer Type.

(*J. A. S. B. XXIV*, 502, *class C* 1; *Rev. Catal. class E b.*)

Obverse and reverse nearly the same as in the Archer Type of Skanda Gupta already described, but reverse legend is क्रमादित्यः 'Kramádityaḥ,' *or* 'the sun of power,' and wt. seems to exceed 140.

References and Remarks.

P. E. XXIX, 17; obtained by Cunningham from Gayá; mon, 8a; wt. not stated; king's body much bent sideways; a curved mark in front of his face.

P. E. XXIII, 20; given to Prinsep by a lady; king wears a sort of dressing-gown fastened by a sash; no letter between his legs; no crescent under arm; no mon.; some ill-defined marks in right field; wt. not stated; seemingly a rude coin.

P. E. XXIII, 22; given to Prinsep by Mr. Cracroft; resembles XXIII, 20, but the king's coat is of the usual shape; in both these coins the king stands upright; wt. not stated.

Marsden MLV; in B. M.; closely resembles P. E. XXIII, 22; crescent between king's arm and name; no letter between king's feet; mon. imperfect; wt. (including attached ring) 150; execution rude.

B. M. Prinsep; resembles Marsden's MLV; mon. imperfect: wt. 141·4. (*Plate IV, fig. 9.*)

A. C.; 2 specimens, no details stated.

The reader may perhaps be surprised at my treating this variety of coins bearing Skanda's name as of doubtful attribution. My reasons are: (1) the heavy wt. of the two coins weighed, which is nearly that of the coins of Nára Gupta and the other imitators of the imperial Gupta coinage; (2) the rude style of the coins; (3) the crescent under the king's arm in the B. M. specimens, as in Nára Gupta's coins; (4) the title 'Kramáditya,' which may be compared with the title Báláditya of Nára Gupta; with Vikramáditya on the rude coin (*Marsden MLI*) bearing the name of Chandra, and with 'Chandráditya,' the title of Vishṇu Gupta (*Thomas, Indo-Scythian coins with Hindi Legends.*)* It is very unfortunate that we do not know the weights of the coins figured by Prinsep, and only know those coins through the medium of engravings which do not appear to be very good. The B. M. Prinsep coin does not exactly agree with any of the three coins engraved in the Essays. For the present I am disposed to regard this 'Kramáditya' variety of the gold coins bearing Skanda's name as a posthumous issue. It is quite possible that the silver coins of Skanda with the Kramáditya legend may also be posthumous, as some of the silver coins struck in the name of Kumára Gupta appear to be. (*Sir E. C. Bayley in Num. Chron. for* 1882, *pp.* 155 *and* 156, *with references to opinions of Dr. Bühler and Genl. Cunningham.*)

NÁRA GUPTA BÁLÁDITYA.

Archer Type.

(*Not included in J. A. S. B. XXIV, catal.; nor in Rev. Catal.*)

Obv. King to left, bow in l., arrow in r. hand, and bird-standard, as in Archer coins of Chandra Gupta II, but very rudely executed; a letter, which generally appears to be either ना 'Gu' or 'Srí,' between king's legs. Under l. arm र; no marginal legend visible.

Rev. Goddess on lotus-flower seat, with fillet and flower, very rudely executed; mon. sometimes wanting; legend बालादित्य, 'Báláditya.'

* The title Vikramáditya is used in the authentic Swordsman and Umbrella gold coins and in some of the silver coins of Chandra Gupta II, but the titles ending in *áditya* appear to have been *specially* favoured by the princes who issued the rude coins. Gen. Cunningham has two specimens of Vishṇu Gupta's coinage.

References and Remarks.

A. A. XVIII, 22; a coin from the great Kálighát hoard found in 1783. See also Records, p. 24.

Marsden, MLIV; wt. 146·5; probably from Kálighát hoard.

B. M. three specimens in gold; *viz.*, Yeames, mon. 8*e*; 'Gu' between legs; wt. 148·7 (*Plate IV, fig.* 10):—Prinsep, mon. etc. as in Yeames; wt. 144·5.—A. Newman, as in Yeames; letter between legs imperfect; wt. 143·5.

There are 6 other specimens in B. M., but of base metal. The I. O. collection contains 33 coins of this type, some bearing the name of Nára, and some other names, and all apparently of base metal.

A. G.; from Oudh; mon. apparently 9*a*; wt. 145·1; metal a pale alloy.

A. S. B.; details not stated.

A. C.; 4 specimens; no details stated.

The historic place of Nára Gupta has not yet been ascertained, but the fact of his coins having formed part of the Kálighát hoard, which consisted entirely of coins of rude and debased style is a strong argument in favour of assigning him a date not earlier than 400 A. D. The companion coin to the Nára figured in A. A. XVIII, 22 is the Kumára coin No. 23 of same plate, which Cunningham attributes to the later Kumára Gupta of Magadha, *circa* 400 A. D. (*Arch. Rep. III*, 137). No. 24 of same plate, from the same hoard is identified by Mr. Thomas as a coin of Vishṇu Gupta Chandráditya,* a prince of uncertain date, but certainly not included in the list of the imperial Guptas.

Mr. Thomas formerly (*J. A. S. B. XXIV*, p. 386), denounced Nára Gupta Bálāditya as "a very ancient myth," and seemed inclined to regard him as an *alias* of Skanda Gupta. In his recent publications, however, he has retracted his former opinion, and now fully admits the separate existence of Nára Gupta, and the reading of his name and title.

Doubtful.

PRAKAŚĀDITYA

Lion and Horseman Type.

(Not included in J. A. S. B. XXIV, catal.; nor in Rev. Catal.)

Obv. Horseman wearing cap or helmet, proceeding to r., mounted on a sorry donkey-like animal, thrusting a weapon (short spear or sword), into the open jaws of a lion, or dragon,

* Indo-Scythian coins with Hindi Legends, in Indian Antiquary for Jan. 1883. Nára Gupta's type is again described in same paper.

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very rudely designed. Under horse उ, 'U ?'; over horse's head, a blurred letter, or small bird-standard, or three dots. Marginal legend imperfect, and not yet deciphered; it seems to include विजसत, 'vijasata.'

Rev. Goddess, rudely executed, seated cross-legged on lotus-flower seat, with fillet in r. hand, and l. hand holding sceptre (?), or empty.

Legend श्री, 'S'rí' and name, see below. Monogram.

References and Remarks.

A. A. XVIII, 18; *obv.* arrow in horseman's l. hand; marginal legend illegible; a character over horse's head; *rev.* sceptre (?) in l. hand of goddess; legend 'S'rí Prakrama Deva'? *(Wilson)*; mon. 4; wt. not stated.

ibid. ib., 19; in *obv.* legend विजय *or* स 'vijaya' or 'vijasa' legible; *rev.* unsymmetrical, fillet and mon. wanting; wt. not stated.

As. Res. XVII, Pl. I, 17; from Kanauj; *obv.* lion not recognized by Wilson; marginal legend of 7 letters on left margin, of which the fourth seems to be त, 't'; *rev.* as in A. A. XVIII, 18, but mon. wanting; wt. not stated. A similar coin, perhaps the same, is badly figured in J. R. A. S. III, O. S., p. 382. Nos. 1 and 2 of S'rí Prakáśa from Bharsar hoard; *obv.* lion not recognized by Kittoe; bird-standard over horse's head; in legend only ज, 'j' legible; *rev.* goddess' l. hand *seems* empty; legend श्री प्रकाश 'S'rí Prakáśa'?; mon. of both coins 8*a*; wt. of No. 1, 146; of No. 2, 145; gold rich, but workmanship inferior (*J. A. S. B. XXI, 400; Pl. XII, 9*).

B. M. Pringle; legends and mon. illegible; nothing distinct over horse's head; wt. 136.

B. M. R. S.; *obv.* bird-standard over horse's head; legend ... वज ... 'vaja' ...; mon. 10*a*; wt. 145; execution fairly good. (*Plate IV, fig. 11.*)

I. O., No. 1; *obv.*, three dots over horse's head; legend lost; *rev.* well executed; legend 'S'rí Prákápáchevaḥ'?; mon. 13; wt. 145·8. (*Plate IV, fig. 12.*)

I. O. No. 2; *obv.* bird-standard over horse's head; legend त [or दे]वजसत; *rev.* legend as in No. 1; mon. three-pronged, imperfect; wt. 146·2.

A. C.; 2 specimens, no details stated.

It is difficult to decide on the attribution of these coins. The Bharsar specimens formed part of a hoard of exclusively Gupta coins, and the type resembles the mintages of Chandra Gupta II and Kumára

Gupta, the only kings of the imperial Gupta line who issued coins with Horseman obverses. The inferior workmanship of these coins, though presumptive, is not *conclusive* evidence of late date, because the undoubted Gupta coins exhibit many degrees of excellence in design and execution. The title on the reverse has been read by Kittoe as 'S'rí Prakáṣa,' and by Wilson as 'S'rí Prakrama' or 'Prakírrti'. Gen. Cunningham informs me that he reads the name as 'Prakáśáditya.' No name resembling any of these forms is a known title of any of the Gupta kings, but the coins might, nevertheless, belong to one of them, for there is no reason to suppose that we have yet discovered all the titles used by those princes. 'S'rí Mahendra' was for a long time regarded as a separate individual, but there is now no doubt that he is the same as Kumára Gupta; and it is almost equally certain that the name Bakra Gupta, which appears on certain silver coins, is intended for Chandra Gupta Vikramáditya, or Vikrama. The direction in which the horseman is proceeding gives no clue, for left and right horsemen occur both in Kumára's and Chandra Gupta's coins. The word 'vijaya' which seems to form part of the obverse legend of the coins in question is found on the Midnapur specimen of Kumára's Horseman to Left type, but does not occur on any coin of Chandra Gupta II. The average weight, 145·6, affords the strongest argument for a comparatively late date, inasmuch as it agrees closely with the weight of the coins of Nára Gupta Bálāditya, and the other imitators of the imperial Gupta coinage. On the whole, I am disposed to think that these Lion and Horseman coins were struck during the fourth century A. D. by some prince who ruled in the eastern dominions of the Guptas not long after the death of Skanda Gupta, but the question of their proper attribution must remain open pending further discoveries and investigation. It is not improbable that Prakaśáditya was one of the dynasty mentioned in the Aphsar inscription, the princes of which seem to have been descendants of the imperial Gupta family.

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2	Chandra Gupta I.	King and Queen	„ purchased.
3	Samudra Gupta.	Javelin, var. 1	„ Prinsep.
4	„ „	„ „ 3	„ (*obv. only.*)
5	„ „	„ „ 4	„ (*ditto.*)
6	„ „	Archer, „ α	„ Eden.
7	„ „	Lyrist	„ ditto
8	„ „	„	I. O.
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Plate III.

1	Chandra Gupta II	Archer, class II α	B. M., Eden.
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Plate IV.

Fig.	*Reign.*	*Type and Variety.*	*Reference.*
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ADDENDUM.

Mr. H. Rivett-Carnac's unique coin of Kumára Gupta Mahendra was accidentally omitted from the Catalogue. The coin was bought at Mathura.

Obv. King standing to front, between two standing females: bird-standard over king's right shoulder. To left of king कुमार 'Kumára,' written vertically; on right of king General Cunningham reads 'Gupta,' but the word seemed to me doubtful. Marginal legend illegible.

Rev. Goddess on lotus-flower seat, as usual. Legend श्री प्रतापः, 'Śrí Pratápaḥ.' The legend seems to me to be perfectly unmistakeable; it is legible even in the poor woodcut of the coin in Proc. A. S. B. Nov. 1883, p. 144. Monogram.

I regard the two female figures as probably intended for the king's consorts, and I have therefore called the type the Two Queens. Dr. Hoernle's suggestion that the central obverse figure is meant for Buddha seems to be quite inadmissible.

The weight of the coin is not stated. The title 'Pratápa is new.'

A Paper on the Medals known as Ramtinkis.—By J. Gibbs, F. R. G. S., M. R. A. S., V. P. B. A. S.

(With Plate No. VI.)

In the note I read before the Society in April last on Ramtinkis, I intimated my intention of writing at greater length as soon as I could collect more materials. Since then I have been home and visited the British Museum and made inquiries there, and also from collectors of Indian coins, including Sir Walter Elliot, but regret that I have not been able to add much to the information I already possessed. I unfortunately missed General Pearce who had been for some time in Southern India, and who had made a collection of these medals—but from what I have since heard from Dr. Bidie, I do not think his collection will be found to differ much from my own. Dr. Da Cunha in Bombay has obtained some six or eight, but they all, save one, resemble some of my own specimens, the exception is a small and very much worn specimen which from the hurried glance I was obliged to be contented with, seemed different from any I had met with; it was about an inch or an inch and an eighth in diameter, cup-shaped, but so rubbed that it was almost impossible to make out what was on it. I have since then had four sent me for inspection only, by my friend Rao Bahadur Trimulrao Venktesh from Dharwar; one of these is a half and the other three are quarter Ramtinkis; they all are of a similar description to the electrotype from Mysore, No. 5 in plate VI; the three quarter pieces were all alike, but two not in such good condition as the third. The following list will show those I have, together with some other varieties I have met with—their weights, diameters, and, in the case of those engraved—the plate and number.

No.	Description.	Quality of Gold.	Reverse.	Owner.	Diameter in inches.	Weight in grains.	Plate.
1	Double.	Good.	Plain.	J. P. Watson	2½	1,485	
2	Whole.	Pale, silver alloy.	Plain.	J. Gibbs	2	696	
3	,,	Very good.	Hanumán in a rectangular space.	,,	1 13/16	690	Pl. VI. No. 2.
4	Half.	Pale, silver alloy.	Plain.	Bombay Branch R. Asiatic Society	1½	364	
5	,,	Good.	Hanumán nearly effaced.	Name unknown	1½	349	
6	Quarter.	Pale, silver alloy.	Plain.	J. Gibbs	1⅛	180	

No.	Description.	Quality of Gold.	Reverse.	Owner.	Diameter in inches.	Weight in grains.	Plate.
7	Quarter.	Pale, silver alloy.	Plain.	J. Gibbs	1⅛	160	
8	„	Pale.	Hanumán.	„	1	166	Pl. No. 4.
9	„	Very good.	Hanumán.	„	1½	160	„ No. 3.
10	„	Good.	Hanumán.	„	1⅓	196	„ No. 1.
11	„	„	Hanumán.	„	1¼	193	„ No. 6.
12	„	„	Seated Hanumán in double △ in ○ and □ with ornaments.	Name unknown	1	159	
13	„	Electrotype.	Hanumán.	Mysore Museum.	1⅛	...	„ No. 5.

In Southern India these medals are thus distinguished—

(1.) The whole, or 'Ramtinki Varáha', supposed to be 4 tolas in weight or 720 grains.

(2.) The half or Ramtinki Pratápa, supposed to be 2 tolas in weight or 360 grains.

(3.) The quarter or Ramtinki Dharana, supposed to be 1 tola in weight or 180 grains.

In the following descriptions *obv.* stand for the concave; *rev.* for the convex or back.

No. 1. *Obv.* Double. Two divisions. *Upper.* Ráma seated with Sítá on his left, umbrella-bearer on his right. Two figures to Sítá's left; sun and moon over Ráma's head; remains of a figure to umbrella-bearer's right and traces of arabesque border.

Below. Hanumán in the middle, facing right, traces of a figure to his left; to his right three monkeys, very indistinct. Very coarse work and much rubbed.

Rev. Nothing visible. *Much worn.*

No. 2. *Obv.* Whole. Four rows of figures. In uppermost Ráma with Sítá to his left. Other figures on both sides but very indistinct. The three other rows contain monkeys; in the centre of the second row Hanumán kneels below Sítá.

Rev. Plain.

This specimen has been much rubbed and battered about having been used for many years in temple worship (see below).

No. 3. *Obv.* Whole. Two rows of figures. *Upper.* Ráma in centre, on his left a standing figure which from

the dress may be Sítá, two more figures, males, to her left; on right of Ráma umbrella-bearer and two other figures. Sun, moon and stars above the figures, an arabesque border and a dotted one above it. *Lower.* Hanumán kneeling on right centre, facing left, a monkey on left centre and figures of men flanking both.

Rev. Hanumán standing in centre of a circle which is surrounded with double squares interlaced, which are again enclosed as a circle. Scroll ornaments fill in the interstices. (Pl. VI, No. 2.)

The work is rather poor, but the medal is in good preservation.

No. 4. *Obv.* Half. Three rows in the style of No. 3, but very indistinct.

Rev. Plain.

This has been much rubbed. The late Mr. W. E. Frere, C. M. G. procured it about 35 years ago in the Southern Mahratta country.

No. 5. *Obv.* Half. Two divisions, *Upper.* Ráma in centre with Sítá on his left knee. Two figures to her left, the first with a chauri, three figures on the right of Ráma, the nearest holding umbrella. These figures appear as set in a frame with arabesque border at the top. *Lower*, parts of four figures on right of centre. Two, a monkey and a bear on left.

Rev. The faintest remains of Hanumán, much rubbed.

This was sent me for inspection only from Dharwar.

No. 6. *Obv.* Quarter. Same design as last, but only one row of figures.

Rev. Plain.

Very much rubbed; similar in work to Nos. 5, 7, 13.

No. 7. *Obv.* Quarter. As the last, but position of figures slightly
Rev. different, more like No. 13.

No. 8. *Obv.* Quarter. Ráma and Sítá seated on a throne. She on his left. Three figures to her left and four to his right, the first on the left has the umbrella and the first on the right the chowri. Arabesque ornament on edge. Moon and sun over Ráma. Below them in *exergue* Hanumán, under Ráma, and apparently 3 Balbodh letters, but not legible.

Rev. Hanumán standing, surrounded by, apparently, an inscription, but the letters cannot be read.

This is very nearly flat—(Pl. VI, No. 4).

No. 9. *Obv.* QUARTER. Resembles *obv.* of No. 3.

Rev. Hanumán in middle standing in a circle, an inscription round, but not readable.

No. 10. *Obv.* QUARTER. *Upper portion.* Ráma seated on a throne, with Sítá on his right, he has his right arm raised. Three monkeys on his left. Four men on right, the nearest holding the umbrella. Arabesque border. In *exergue* 2 lines of apparently Balbodh letters but imperfectly formed. It has been suggested that they may be intended for

श्री	रा	म	प्र	स	न्न
Srí	Rá	ma	pra	sa	nna

१	९	१
1	9	1

"Srí Ráma prasanna 191

"May Ráma bless" or "be propitious" ... 191

Rev. Hanumán standing in a square within a circle, holding a club with its knob downwards, an inscription in imitation Nagari letters but from which nothing can be made out. (Pl. VI, No. 1.)

No. 11. *Obv.* QUARTER. Similar in style to last, but figures reversed, Sítá and four men on Ráma's left who has his left hand raised. Umbrella as usual, on right three monkeys. Hanumán very small at Ráma's feet. In *exergue*, bastard Nagari letters not readable.

Rev. Hanumán as in the last, letters on the sides of the parallelogram and outside the circle, but not readable. (Pl. VI, No. 6.)

No. 12. *Obv.* QUARTER. Ráma with Sítá on his left knee, three figures on each side, on Sítá's left, umbrella-bearer, a man, a monkey; on Ráma's right the chowri-bearer, a man, a bear, in *exergue* 4 letters illegible. Florid ornamentation over Ráma.

Rev. Hanumán seated in middle in a double triangle in a circle and that again in squares, ornaments of dots and marks in the corners all enclosed in another circle.

No. 13. *Obv.* QUARTER. Ráma and Sita. Three men to his right, two to her left. Grotesque monkeys below.

Rev. Hanumán with an illegible inscription round him. Very imperfect. (Pl. VI, No. 5.)

This is an electrotype from one in the Mysore Museum.

The story on them all, illustrated to a greater or less degree, is that of Ráma and Sitá, on their reconciliation and her having proved her purity after being seized and taken off to Lanka by Rávaṇa, and is taken from the Rámáyaṇa. The rows of figures are composed of men and monkeys, the latter forming part of the army of Hanumán by whose means Sitá was rescued. In all the large ones, Hanumán is represented standing or kneeling in the centre of the row below Ráma and Sitá, and holding up a flower to them: in the smaller, he alone sits just below Ráma and his consort. Sitá in some is represented on Ráma's lap, in others seated by him on the *gadi*; the attendants have chowries and the umbrella. The monkey in the same row with Ráma and Sitá is Sugríva the king of that tribe to whom Hanumán was adviser. In some the figure of a bear appears; this is intended to represent Jámbavat, the king of the bears, who with his army also aided Ráma in his attack on Lanká.

As none of these medals have any dates or any legible inscriptions, the determination of their age becomes a matter of great difficulty. From all I have been able to learn these pieces were never used as coins. At first, finding that there were 3 sorts, whole, half, and quarter Ramtinkis, and that the weight of each sort was in correct proportion to the others, I was inclined to think they might have been coins, but I have now come to the conclusion that they are medals struck apparently for purely religious purposes. They are highly venerated in Southern India and most families of respectability there have one or more; they are also kept in temples and used in the daily worship. They have been known for very many years, and in the absence of any actual evidence of their date I have been led to seek for any traditions which may exist, and the following has come to me from a trustworthy source.

In about the 9th century A. D., there flourished a famous Reformer of the Saiva sect named Sankaráchárya, who travelled about the country chiefly in Southern India and founded '*maths*' or hermitages in various places; amongst others at Sringeri near the source of the Toombudra river, Koodalji in the Holehonor Taluka of the Seomoga division, in the Mysore territory, Sunkeshwar in the Chikkodee Taluka of the Belgaum Collectorate, Humpi in the Hospet Taluka of the Bellary District, and some in Gujarat, one of which was I believe in Surat. In the course of time the subordinate Swamis became independent, and some of them very rich. The last Swami but one of Koodalji was one of these, and had a gold throne on which he sat to receive his disciples and followers. It was customary among these followers to make large gifts to the shrine, in which were idols, images of Ráma, Krishṇa, Siva, &c., which, as well as the apparatus for performing the worship, were

made of gold or silver—and part of the worship consisted in bathing the idols daily in milk, curds, ghi, sugar, honey, fruits, and then in water, after which they were bathed in gold, which is done by pouring over them handfuls of gold coins such as Ramtinkis, Huns and other Hindu coins; these coins are kept specially for this use and are deemed to be sacred, and although as a favour they may be shown to Europeans, none can touch them but the priests.

I do not know how it came about, but the later Swamis at Koodalji lost much of their property, and during the famine of 1876-77 disposed of the remainder of these treasures, and amongst other things mortgaged three Ramtinkis—which according to tradition had been handed down from Swami to Swami from the foundation of the '*math*' in the 9th or 10th century A. D.—to a banker, with the stipulation that if not redeemed within six months they should become his property: the time elapsed, and a year or so after my old friend Rao Bahadur Trimulrao, who was connected by marriage with the banker, heard of them and purchased them for me. They are those numbered 2, 6, 7 in the above list. They have been much knocked about from temple use, the large one especially; they are highly alloyed with silver, and are in consequence very pale in colour. The largest is a whole Ramtinki and has rather the look of having been cast, not struck. Nos. 6 and 7 are quarters and one of them is almost exactly similar to the electrotype from the Mysore Museum, specimen No. 13.

If we can trust the tradition above alluded to, these medals may be 800 or 900 years old, and the similarity between No. 6 and No. 13 would point to an early date also for the original of the latter.

With regard to the other varieties, I can form no opinion as to their real age, but I am inclined to consider all but No. 8 modern, that is not over 100 to 150 years; one exactly resembling No. 6 was shown me by a Bráhman in Poona, who said he knew it had been worshipped in his family for over 70 years, and might have been for a far longer time.

The large double one No. 1 is of very coarse work, but of pretty fair gold, it is much rubbed and belongs to Mr. J. P. Watson in Bombay.

I classify the medals I have met with in 3 descriptions:

α. Those of very pale gold heavily alloyed with silver.
β. Those of pure gold or nearly so with very fine work.
γ. Those of pretty good gold and coarser work.

Under α come Nos. 2, 4, 6, 7
„ β „ Nos. 3, 9,
„ γ „ Nos. 15, 10, 11, 12

No. 8 varies from all, being of pale gold but fine work.

From the many inquiries I have made from natives regarding these medals, I have invariably found that they consider the paler gold the more ancient.

When I was in Poona some 6 or 7 years ago, the chief Sankarácharya passed through on one of his religious tours, and hearing that he had with him a remarkable Ramtinki I paid him a visit; he was a particularly pleasant spoken gentlemanly person, and had his gold shrine set with rubies and emeralds valued at 2 lacs of Rupees erected for my inspection, and also many of the jewels of his '*toshakhana*' set out; on my asking for the Ramtinki, a priest produced a box wrapped in several covers, and after opening cover after cover a bundle was taken out in which on being opened, appeared the Ramtinki; the priest took it in his hand and held it for me to look at, and it was very like No. 2 in the above list, but I think rather larger, and had 5 rows of figures; it was of pale gold and remarkably deeply cup-shaped, it had evidently been much used and was therefore rubbed and knocked about. I could not get its weight or its diameter; so I had to trust to my eye to assess them.

Dr. Bidie of Madras has sent me drawings of several in the Madras Museum.

The following is a description of them:

No. 1. *Obv.* Whole. *Flat. Upper.* Ráma and Sítá seated with six figures in two rows on each side. *Lower.* Hanumán in middle standing, indistinct figures on each side of him.

Rev. 2 Interlaced squares with ornaments in the interstices with a lozenge-shaped centre, round which appear unformed letters. The subject in the lozenge is not traceable. Wt. 677·3 grs. Diam. $1\frac{1}{16}$ in. Madras Museum.

No. 2. *Obv.* Quarter. *Flat.* Two figures on a platform in the middle, umbrella over them, a figure on left with a Lion rampant below it, ornaments and apparently letters.

Rev. Upper. Eight figures in a row, each holding a lance with a wreath or a torch on it.

Lower. Marks which are said to resemble part of the Muhammadan creed and the word "Sindhya." Wt. 189·2 grs. Diam. $1\frac{5}{16}$ in. Madras Museum. *Very rude work.*

No. 3. *Obv.* Quarter. *Flat.* Much the same as *obv.* of No. 2, no lion but a monkey on left.

Rev. Four figures on a platform with their left hands raised, an umbrella in centre, arabesque border. Wt. 160·4 grs. Diam. 1 inch. Madras Museum. J. Gibbs.

No. 4. *Obv.* WHOLE. Very similar to that of Pl. VI, No. 2.

Rev. Hanumán standing in a circle which is enclosed in interlaced squares with ornaments in corners. Wt. 662·7 grs. Diam. $2\frac{1}{16}$ in. Madras Museum.

No. 5. *Obv.* DOUBLE (?) Somewhat similar to No. 4, but work rather more in relief.

Rev. 5 lines of what appear to be unreadable letters divided by bands of ornament. This belongs to a banker at Vellore, who gives its weight at 30 pagodas: a pagoda is said in the money tables to weigh $52\frac{1}{2}$ grs., if this is correct the piece must weigh $52\frac{1}{2} \times 30 =$ 1,575 grs. or more than double a single Ramtinki.

Nos. 2 and 3 of these are not in my opinion Ramtinkis, they are, I believe, specimens of the modern medals struck at some of the great places of pilgrimage in Southern India. One similar to No. 2 was described and depicted in the Proceedings of this Society for 1882, having been exhibited by General Pearce. I have one which resembles No. 3, having only four figures on one side, but having on the other two standing figures on a sort of dais with a man on the right and a monkey on the left.

I have seen several of this latter description: they are of very inferior workmanship, and of no pretensions to age. Mr. Scott at Tanjore showed me one he had, and I have seen another in the possession of a native gentleman at Calcutta, who looked upon it as an object of great veneration, and paid a very large sum for it. It has the same device as No. 3, but was of even rougher work and exactly similar to Mr. Scott's.

I must not conclude this paper without alluding to Marsden's notice of these medals. He appears only to have seen quarter Ramtinkis and those in the illustration in Pl. XLVIII are of the ordinary descriptions. These, as all his other coins, are now in the British Museum, where, until the Chief of Vinchore, at my suggestion, sent home a whole Ramtinki, they had none but quarters in the collection, the one sent home was a duplicate of No. 2 in Plate VI.

I consider these medals to have been struck as votive offerings, their weight varying perhaps in accordance with the wealth or status of the donor or donee. I regret I have not been able to get more accurate information regarding them, but I trust that this article with its illustrations may lead to the Society or myself obtaining further information on the subject.

On the Geography of India in the Reign of Akbar.—*By* JOHN BEAMES, B. C. S. (With a Map.)

No. I. Subah Avadh (Oudh).

The object of this series of papers is to reconstruct as far as possible the map of the Mughal empire at the time of the first great settlement of the financial and political administration effected in A. D. 1582 by Rájá Todar Mal.

The details of this important operation—the basis of all subsequent settlements—are preserved to us in the Aín-i-Akbari, the Persian text of which has been fixed and published by the late Professor Blochmann. He did not live long enough to translate the whole work, and as the valuable notes which he had collected for the second volume, (in which the details of Todar Mal's settlement are given), have been lost; the greater portion of the work has to be done over again. The continuation of the translation has been entrusted by the Society to other hands, and I therefore refrain from encroaching on that ground. But I presume there is no objection to my extracting from the Persian text such details as are necessary for my purpose and supplying such comments as may be required for their elucidation. There is room for many workers in the vast and as yet imperfectly explored mine of the Aín. On the present occasion I shall confine myself to geography, reserving for a larger work on which I am engaged references to the Muhammadan historians and other authorities.

The dominions which Akbar either ruled, or claimed to rule, were divided, as we learn from the Aín, into twelve provinces, to which His Majesty gave the name of Súbahs. These were

Iláhábád.	Ajmír.	Bangálah.	Láhor.
Agrah.	Ahmadábád.	Dihlí.	Multán.
Avadh.	Bihár.	Kábul.	Málwah.

to which were subsequently added three more, *viz.* :—

Birár. Khándesh. Ahmadnagar.

making a total of fifteen.

Abul Fazl gives a chapter to each Subah, and takes them in geographical order, beginning with Bangálah (Bengal) in the extreme east, and going westwards. I have departed from this order for the following reasons.

The Subah of Bangálah is by far the largest of all, and as it was not at the time of Todar Mal's settlement actually under the sway of the

Dehli emperor, the details given in the Aín are less full than those of other Subahs. Moreover, owing to various causes which I need not explain in this place, the changes that have occurred since the sixteenth century are more numerous and perplexing than in any part of India. For Bengal we have some of Blochmann's work, a general sketch of the extent and position of the nineteen sarkárs, and detailed identification of two or three of them.* I am now engaged in working out the rest, but I am not yet quite ready with Bengal, and though I have received much assistance from the Collectors of the various districts—which I take this opportunity of gratefully acknowledging—I fear some time must elapse before the whole sarkár will be fully reconstructed.

Bihár was not undertaken by Blochmann, but I have nearly finished my identification, and hope to publish it shortly.

Iláhábad, Agrah, Dihli and all those parts of Subahs which were included in the North West Provinces in 1844 have been worked out by Sir H. Elliot and may be found at Vol. II, p. 82 of his Races of the N. W. P. (my edition) and those parts left untouched by him I am now working out.

Under these circumstances I have thought it better to begin with Oudh, as I have been able to complete my work on that Subah. Oudh was not British territory when Elliot wrote, and he has therefore omitted it from his lists, with the exception of Gorakhpur, which has all along formed part of the N. W. P.

The materials which I have used are chiefly the reports of the recent settlements of the various districts, supplemented by much valuable information scattered here and there in the *Oudh Gazetteer*. The settlement reports being official publications are not generally accessible to the learned public either in India or Europe, they contain much curious and useful information, and in respect of the old names of estates and parganahs give data not usually procurable, being derived from local tradition, the histories of the great families, and the records preserved by the Kánúngoes or fiscal recorders, an office founded by the Mughal Emperors and which has survived to our own times. I have thought it might be serviceable to students to publish in the Society's Journal material at present virtually buried in the Settlement Reports, and to bring together into one general view the scattered notices to be found in the *Gazetteer*. The accompanying map is an attempt at making our knowledge of the subject precise and definite.

* See his articles on the Geography and History of Bengal in J. A. S. B. Vol. XLII, p. 209; Vol. XLIII, p. 280; Vol. XLIV, p. 275 and in Appendix to Hunter's Statistical Account of the 24 Parganas District.

I. Sarkar Avadh.*

21 mahals. Area 2,796,206 bighas 19 biswas. Revenue 40,956,347 dams nakdí, 1,680,247 dams sayurghál. Castes various. 1,340 cavalry, 23 elephants, 31,700 infantry.

1. Avadh bá haveli. 6 mahals. 38,249*b*. 17*b*. 2,008,366*d*. 1,58,741*s*. Brahmans and Kunbis. 50 horse, 500 foot.
2. Amboḍhá. Has a fort of burnt brick 2,82,097 bighas, 1,298,724*d*. 7,318*s*. Bais. 30 horse, 700 foot.
3. Ibrahímábád. 19,338*b*. 8*b*. 445,417*d*. 103,806*s*. Ansáris.
4. Inhoná. Has a fort of burnt brick. 74,090*b*. 126,847*d*. Chauhans recently converted to Islam (nau muslim). 100 horse, 2000 foot.
5. Pachchhimráṭh. 289,085*b*. 4,247,104*d*. 38,885*s*. Rajputs of the Báchhil and Gahloṭ clans 20 horse, 500 foot.
6. Bilahrí. Has a fort of burnt brick. 15,859*b*. 815,831*d*. Bachgotis. 50 horse, 2000 foot.
7. Basoḍhí. 31,188*b*. 505,473*d*. 1,500*s*. Bachgotis. 20 horse, 500 foot.
8. Thána Bhadánw. 8,703*b*. 2*b*. 427,509*d*. 36,172*s*. Bachgotis. 1000 foot.
9. Bakṭahá. 44,401*b*. 385,008*d*. 3,960*s*. Bachgotis. 500 foot.
10. Daryábád. Has a fort of burnt brick. 487,014*b*. 5,369,521*d*. 226,871*s*. Rajputs of the Chauhán and Raikwar clans. 100 horse. 2000 foot.
11. Rudauli. Fort of burnt brick. 351,533*b*. 3,248,680*d*. 249,083*s*. Chauhán and Bais Rajputs. 50 horse, 2000 foot.
12. Sailak. Fort of burnt brick. 571,071*b*. 4,723,209*d*. 200,945*s*. Raikwár Rajputs. 100 horse, 2000 foot.
13. Sultánpúr. Fort of burnt brick. 75,893*b*. 3,832,530*d*. 98,967*s*. Bachgotis. 300 horse, 8 elephants, 7000 foot.
14. Sátanpúr. Fort of burnt brick. 80,154*b*. 1,600,741*d*. 109,788*s*. Bais converted to Islam Bachgotis, Joshis (?). 300 horse, 4000 foot.
15. Sabihah. 104,780*b*. 1,609,293*d*. 87,200*s*. Rajputs. 30 horse, 1000 foot.
16. Sarwápálí. 58,170*b*. 1,210,335*d*. 48,107*s*. Bachgotis. 1000 foot.

* Translated from the Persian text of the Aín-i-Akbari, Blochmann's Ed. Vol. II, p. 435.

17. Satrikh. 37,041*b*. 11,26,295*d*. 92,695*s*. Ansáris. 20 horse, 1000 foot.

18. Gúárichh. 79,158*b*. 3,773,417*d*. 3,782*s*. Raikwárs. 50 horse, 1,070, foot.

19. Kishní. Fort of burnt brick, 25,674*b*. 1,339,286*d*. 123,847*s*. Rájputs, 3 elephants. 1,500 foot.

20. Mangalsí. 116,401*b*. 1,360,753*d*. 86,504*s*. Sombansis. 20 horse, 1000 foot.

21. Naipur. 5,997*b*. 308,788*d*. 2,945*s*. Castes various. 500 foot.

[Note. In the above list the name of the mahal (*i. q.* parganah) comes first, then the cultivated area in bighas and biswas. Next the revenue in dams (40 = 1 akbarshahi rupee) then the "sayúrghál" or rent-free lands;* then the prevailing caste or clan of the inhabitants, and the contingent of troops both horse and foot. The abbreviations are explained by this note.]

Of these 21 mahals those numbered 1, 4, 5, 7, 10, 15, 17, 18, 20, are still in existence under the same names and probably with nearly the same boundaries as in Akbar's time.

The following require some explanation.

2. Amboḍhá, now written Amorha, is on the left bank of the Ghogra and is now in the district of Basti in the N. W. Provinces. In the Gonda S. R.† p. 11 it is said to have included Bámhanípair, but this is a mistake as "Bambhanpárah" occurs in the Aín as one of the mahals of Sarkár Gorakhpur. Amboḍhá, however, appears to have included the southern part of the present parganah of Nawábganj on the left bank of the Ghogra facing the city of Ajodhya.

3. Ibrahimábád is now only a village in parganah Satrikh. O. G. ii. 85.

6. Bilahri is now the northern portion of parganah Sultanpúr and is called Baraunsá, see below No. 13.

8. Appears to be now known as Tappah Asl. O. G. iii. 457 where there is a partial reconstruction of this and some other sarkars taken from the Sultanpúr S. R. by Mr. A. F. Millett, C. S. I have followed this officer's guidance almost entirely, as far as it goes.

9. Bakṭahá is not traceable. Mr. Millett says it is now Baksaha in Bára Banki district, but this latter is not mentioned either in the Bara Banki S. R. (which is meagre on this subject) or in the O. G.

11. Rudauli is still in existence but is smaller than in Akbar's time, when it included the present Khandansá parganah to the south-east.

* See Blochmann's Translation of the Aín, p. 268.

† S. R. stands for Settlement Report, O. G. for *Oudh Gazetteer*.

12. Sailak presents some difficulty. In O. G. i. 92, it is said to have comprised the present parganahs of Bado Saráí, Ramnagar and Muhammadpur, as well as a tract described as Lálpur-Rámpúr-Mathurá, which probably is on the tongue of land at the junction of the Ghogra and Chauká rivers now in South Kundri parganah. But if this is correct it is difficult to understand where to put the Bhitauli parganah of Sarkár Lakhnau. Either Sailak must have consisted of two parts, one (Bado Sarai) lying to the south of Bhitauli, and another consisting of the remaining parganahs to the north of it, or else Bhitauli must have been cut in two by Sailak. In the map I have adopted the latter supposition which seems more in accordance with the history. The two parganahs of Bhitauli and Sailak are, however, very much mixed up throughout the Muhammadan period, indeed they are occasionally spoken of as identical, and I shall be glad if any local officer will throw some light on the subject. Unfortunately the author of the Bára Banki S. R. omits all historical and geographical details, and the *Gazetteer* does not supply the omission. The portion of this Subah which is included in Bára Banki is consequently the most difficult of all to restore.

13. Sultánpúr was that part of the present parganah of that name which lies on the right bank of the Gumti, that part which is on the left bank was formerly known as Bilahri (see No. 6) a name which includes also Baraunsá. The southern portion is known as Sultanpúr Miranpúr or Kathot, a name not found in the Aín.

14. Sátanpur and Kishni (No. 19) now compose parganah Jagdispúr in Sultánpúr district.

16. Sarwápáli is now Amsin in Faizabad district.

19. See No. 14.

21. I cannot find this place. Mr. Millett in his valuable reconstruction of this Sarkár has omitted Nos. 20 and 21. In O. G. i. 462 it is said to be the same as Iltifátganj, but the position of this place is not indicated.

Three modern parganahs in this part of the country (Bára Banki again !) are obscure.

i. Mawái Maholárá. This seems from O. G. ii. 494 to have been created out of parts of Rudauli and Basoṛhi, and I have accordingly in the map divided it between them.

ii. Surajpúr. Lies between Daryábád of Sarkar Audh and Siddhaur of Sarkár Lakhnau. In the O. G. in two places (iii. 332, and iii 447) it is said to have been in existence under that name in the time of Akbar, but it does not occur in the Aín. It appears to have been included under Daryábad and I have while waiting for further information shewn it so in the map.

iii. Partábganj. This is admittedly a modern parganah, and I have

included it under Satrikh, the area of which seems to be considerably smaller now than it was under Akbar.

The Sarkár of Avadh or Audh, as thus reconstructed, was a tolerably compact tract of about 90 miles in length lying principally on the right bank of the Chauká and Ghogra, but including also a strip of varying width on the left or northern bank of the latter. The breadth varies very much, and owing to the want of details for Bára Banki cannot be exactly stated. At its north-western end it is much mixed up with parts of Sarkárs Lakhnau and Bahráich, and two detached portions of the former Sarkár, one consisting of parganah Siddhaur, the other of parganahs Isauli and Garh Amethi, are included in it on its south-western side. On the south it marches with Sarkárs Mánikpur and Jaunpúr of the Subah of Iláhábád.

In the endeavour to depict accurately the exterior and interior boundaries I have felt this difficulty that though parganahs bearing the same names as these in the Aín are still extant, it is far from certain that the boundaries were the same as now. The areas given in the Aín only refer to cultivated land, and the exact size of Akbar's bigha is somewhat uncertain. The map can therefore only claim to be an approximation, though probably a very close approximation, to the actual facts of A. D. 1582.

II. Sarka'r Gorakhpu'r.

Twenty-four mahals. 244,283*b*. 13*b*. 11,926,790*d*. 51,235*s*. Castes various. 1,010 horse, 22,000 foot.

1. Atraulá. Fort of burnt brick. 32,052*b*. 1,397,367*d*. 6,935*s*. Afghan Miánas. 50 horse, 1,500 foot.
2. Anhaulá. 4,114*b*. 17*b*. 201,120*d*. 2,170*s*. Bisens, horse. 400 foot.
3. Binaikpúr. Fort of burnt brick. 13,857*b*. 7*b*. 6,00,000*d*. Surajbansí Rajputs. 400 horse, 3000 foot.
4. Bámbhanpárah. 6,688*b*. 414,194*d*. Rájpúts. 2000 foot.
5. Bhanwápárah. 3,105*b*. 15*b*. 155,900*d*. Bisens. 200 foot.
6. Tílpúr. Fort of burnt brick. 9,005*b*. 17*b*. 4,00,000*d*. Súrajbansí Rájputs. 100 horse, 2000 foot.
7. Chilúpárah. Fort of burnt brick. 6,036*b*. 14*b*. 289,302*d*. Rájputs. 2000 foot.
8. Daryápárah. Fort of burnt brick. 31,357*b*. 19*b*. 1,517,078*d*. 5,067*s*. Bisens. 60 horse, 400 foot.
9. Dewápárah and Kotlah. 2 mahals. 16,194*b*. 17*b*. 717,840*d*. Bisens. 20 horse, 2000 foot.
10. Rihlí. 33,183*b*. 19*b*. 1,618,074*d*. 20,873*s*. Bisen Rájputs. 1000 foot.

11. Rasúlpúr and Ghausí. 2 mahals. 4,200*b*. 622,030*d*. Sombansis. 500 foot.
12. Ramgaṛh and Gaurí. 2 mahals. 10,726*b*. 485,943*d*. Sombansis. Included in Bináikpúr.
13. Gorakhpúr bá havelí. Has a fort of burnt brick, on the banks of the river Ráptí. 12,656*b*. 567,385*d*. 3919*s*. Súrajbansis. 40 horse, 200 foot.
14. Kaṭihlá. Fort of burnt brick. 900*b*. 12*b*. 40,000*d*. Bisens. 300 horse, 200. foot.
15. Kihlápárah. Fort of burnt brick. 16,012*b*. 425,845*d*. Bansis (?) 20 horse, 300 foot.
16. Mahaulí. Fort of burnt brick. 2,523*b*. 617,256*d*. Bisens. 2000 foot.
17. Manḍwah. 1,909*b*. 19*b*. 452,321*d*. Sombansis. 20 horse, 500 foot.
18. Manḍlah. 1,252*b*. 6*b*. 51,100*d*.
19. Maghar and Ratanpúr. 2 mahals. Fort of burnt brick. 26,062*b*. 1,352,585*d*. 16,771*s*. Bisen and Bais. 2000 foot.

The above list is taken from the Persian text, and differs in some particulars from Elliot's (Races of N. W. P. Vol. II, p. 119). It also gives the area and revenue and other details omitted by Elliot. The following remarks are necessary for its elucidation.

1. Atraulá. The correct name is Utraulá or perhaps strictly Uttaraulá. Akbar's parganah includes the modern parganahs of Utraulá, Sadullahnagar and Búrhápárah on the eastern frontier of the Gonda district (Gonda S. R. p. 11, O. G. s. r. Utraula, iii. 574).

8. Daryápárah is the spelling in the text and no variants are given by Blochmann. The parganah which is still extant is, however, now called Dhuriápárah. In the map I have given the name as it is in the Persian text, which of course might also read Duryápárah as no vowels are given.

9. Dewapárah and Kotlah. So in the text, but Kotlah كوتله is an easy and probable mistake for Kohánah كوهانه. The real name appears to be Dewápárah Kuhanah which I have shewn on the map after Elliot's explanation. It covers all the east of the Gorakhpúr district.

10. Rihlí comprises the northern parganahs of Mánkápúr, Mahádewá and Nawábganj. Probably, as suggested under Amorhá in Sarkar Audh, a portion of Nawábganj belonged to that parganah. See Gonda S. R. p. 11.

12. Rámgaṛh and Gauri appear to have included all the forest tract north of the Rapti, the northern parganahs of Balrámpúr and Tulsipúr.

15. Kihlápárah may be, as Elliot suggests, a mistake for Rihlápárah,

an extant parganah. It is no argument against this that to read Rihlapárah would disturb the alphabetical order in which the mahals are given; for I have found a considerable number of such errors in other Subah lists in the Aín.

18. Manḍlah cannot be traced.

The remaining mahals of this Sarkár are still extant.

Sarkár Gorakhpúr thus stretches from the Gandak to the Ghogra, and includes the modern Districts of Gorakhpúr and Bastí in the N. W. Provinces and the greater part of Gonda in Audh. The western boundary where it marches with Sarkár Bahraich is however extremely indefinite, and the same may be said of the northern boundary. Even in the present day a very large portion of this tract is covered by dense forests, and this must have been the case to a much greater extent in the sixteenth century. The very small areas given for parganahs which stretch for scores and scores of miles prove this, and historical proofs are not wanting to confirm the impression. Consequently the boundaries of the different mahals in the north of this Sarkár cannot be restored with any approach to accuracy, and I have therefore not attempted to lay them down on the map; this omission is less to be regretted when it is considered that there were certainly no definite boundaries in Todar Mal's time. There were clearings in the forest here and there, which were loosely grouped together under some local name taken from the residence of the Hindu chief or Afghán adventurer who was powerful in those parts. The dominions (if we may use the term) of these chiefs varied constantly as mahals or towns were taken and retaken by contending forces in the petty wars and raids that were constantly going on.

III. Sarka'r Bahra'ich.

11 Mahals. Area 18,23,235*b*. 8*b*. 2,41,20,525*d*. 466,482*s*. Castes various. 1170 horse, 14,000 foot.

1. Bahráich bá havelí. Fort of burnt brick on the banks of the river Saraũ. 697,231*b*. 9,139,141*d*. 402,111*s*. Rajputs. 600 horse 4,500 foot.
2. Bahrah. 926*b*. 37,135*d*. Kahnah. 500 foot.
3. Husámpúr. Fort of burnt brick. 157,415*b*. 3,707,035*d*. 1,601*s*. Raikwars, Bháles and a sept of Bisens. 70 horse, 900 foot.
4. Dánkḍon. 84,436*b*. 440,562*d*. Janwárs. 2,000 foot.
5. Rajhat. 4,064*b*. 11*b*. 166,780*d*. Janwárs. 1000 foot.
6. Sanjhauli. 124,810*b*. 877,007*d*. Janwár Rajpúts.
7. Sultánpúr. 58,146*b*. 166,001. Janwárs. 700 foot.

8. Fakhrpur. Fort of burnt brick. 191,720*b*. 3,157,876*d*. 56,035*s*. Raikwárs, 150 horse, 2,000 foot.

9. Firozábád. Fort of burnt brick. 108,601*b*. 1,933,079*d*. 4,107*s*. Tunwar Rájpúts. 200 horse, 8,000 foot.

10. Kila' Nawágarh. 417,601*b*. 2,140,757*d*. Various castes. 50 horse, 1,000 foot.

11. Kahronsa. Fort of burnt brick. 28,489*b*. 17*b*. 1,315,051*d*. 2,628*s*. Bais. 100 horse, 1,000 foot.

All the mahals of this Sarkár are either still extant under their old names, or distinctly traceable. The Settlement Officer of this district Mr. H. S. Boys, C. S. has effected a very complete reconstruction of the Sarkár accompanied by a clear map. I have filled in the boundaries on my own map from those given by Mr. Boys. One or two points, however, call for notice.

1. The figures for area and revenue given in the S. R. do not agree with those in Blochmann's text. Mr. Boys probably worked on Gladwin's translation which is not always correct. I have given the correct figures above. The mahal of Bahráich included the modern parganah of that name, and Akona (except a small portion north-east of the Rapti) all but 133 villages of Naupára, all but the trans-Rapti portion of Charda and Bhinga this side of the Rapti.

2. Bahrah included the rest of Bhinga and 77 villages now in Nipál.

3. Husámpúr now known as Hisampúr is still extant, but it was larger formerly, including a considerable tract to the south-east now in the Gonda district, while on the north it included some estates now in Fakhrpúr.

4. Dankḍon now called Dángdoí (for which دانگدون in Blochmann's text is possibly a copyist's error) comprised the rest of Akona, the rest of Bhinga, and the northern part of Tulsipúr. Its boundaries were probably never very clearly defined.

5. Rajhat is, all but a few villages, now in the Nipal taráí.

6. Sanjhaulí, written by Boys Sijaulí, contained some villages now in Nipál.

7. Sultánpur is an *enclave* in Bahráich and also included a few villages now belonging to Nipál.

10. Kila' Nawágarh. This comprised the modern parganahs of Tambúr, north and south Kundri in Sitápúr and apparently parts of Dhaurahra and Firozábád in Kherí, but its boundaries are not very clear. It seems generally speaking to have occupied the whole Doab between the Kauriala and Chauká rivers, except a small portion at the extreme south which belonged to Sailak or Bhitauli.

11. Kahronsá is a difficult mahal to restore. The local settlement

officers who have had the advantage of consulting the Kánúngos, the records of the great families, and other local sources of information have been followed in my map, but the exact boundaries for this, as for all parganahs beyond the Ghogra are probably now not determinable.

The Sarkár appears to have occupied all the western portion of the trans-Ghogra country; its boundaries on the Gorakhpúr side are very uncertain. An immense proportion of it was jungle with scattered settlements of Junwár, Raikwár and other Rajpút clans here and there. It stretched far up into the Nipal Tarái and much of it was only nominally under Musalmán sway, the revenue derived from the northern mahals was very small, and the hill chieftains appear constantly to have levied even that. There was also, however, a long narrow slip on the right bank of the Chauka which yielded a much better revenue and was much prized as is shewn by the frequency with which it changed hands under royal grants.

IV. Sarka'r Khaira'ba'd.

22 mahals. 1,987,700*b*. 6*b*. 43,644,381*d*. 171,342*s*. Castes various. 1,160 horse, 27,800 foot.

1. Barwar Anjanah. 79,670*b*. 7*b*. 4,325,237*d*. 107,079*s*. Rájputs and Bráhmans. 50 horse, 2,000 foot.
2. Biswah. Fort of burnt brick. 135,119*b*. 3,545,643*d*. 107,916*s*. Báchhil Rájpúts. 30 horse, 1000 foot.
3. Pálí. 144,627*b*. 1,849,270*d*. 37,945*s*. Asanín (?). 30 horse, 1000 foot.
4. Báwan. 56,156*b*. 1,161,235*d*. 62,488*s*. Asanín (?). 20 horse, 1000 foot.
5. Basrah. 60,063*b*. Castes various. 300 foot.
6. Bhurwárah. Fort of burnt brick. 8,971*b*. 18*b*. 435,430*d*. Ahanín (?). 50 horse, 2,500 foot.
7. Bisárá. 21,740*b*. 676,066*d*. Báchhils, 200 foot.
8. Pailá. 981*b*. 14*b*. 48,202*d*. Ahanín (?) 200 foot.
9. Chhitiápúr. 64,706*b*. 1,765,641*d*. 41,094*s*. Gaur Rájputs. 50 horse, 700 foot.
10. Khairábád bá Haveli. 2 mahals. Fort of burnt brick. 159,072*b*. 6,161,234*d*. 174,191*s*. Bráhmans, 50 horse, 2000 foot.
11. Sándi. Fort of burnt brick. 211,804*b*. 3,055,339*d*. 195,106*s*. Sombansís. 20 horse 2000 foot.
12. Sarah. 28,832*b*. 2,091,983*d*. 8,666*s*. Chauháns. 60 horse, 500 foot.
13. Sadrpúr. 120,698*b*. 831,175*d*. 15,581*s*. Janwárs and Báchhils, 20 horse, 500 foot.

14. Gopámau. Fort of burnt brick. 1,07,368*b*. 5*b*. 5,620,466*d*. 562,037*s*. Rajputs Kunwar (var. lect. Bisen and Kunwar). 100 horse, 3000 foot.
15. Kherí. Fort of burnt brick. 260,168*b*. 3,250,522*d*. 50,522*s*. Bisen Rajpúts and Janwárs. 60 horse, 1,500 foot.
16. Khairígaṛh. One of the strongest forts in Hindustán, and it has six forts of brick plastered with lime at a short distance from it. 43,052*b*. 7*b*. 1,829,327*d*. Bais, Bisen, and Báchhil and Kahanah (?). 300 horse, 1,500 foot.
17. Kharkhílá. 15,815*b*. 16*b*. 473,727*d*. Asín (?). 20 horse, 500 foot.
18. Khánkatmau. 3,057*b*. 11*b*. 235,656*d*. Castes various. 400 foot.
19. Láharpúr. 208,288*b*. 3,029,479*d*. 209,079*s*. Bráhmans. 50 horse, 1000 foot.
20. Machhrahṭah. 71,069*b*. 2,112,176*d*. 2,430*s*. Báchhil Rajpúts. 30 horse, 2000 foot.
21. Nímkhár. Fort of burnt brick. 58,775*b*. 18*b*. 3,566,055*d*. 66,055*d*. Ahirs. 100 horse, 1,500 foot.
22. Hargáṇw. 66,952*b*. 200,000*d*. 26,385*s*. Bráhmans. 20 horse, 500 foot.

In this sarkár all the mahals have been identified by the settlement officers of the Hardoí, Sítápúr, and Kheri districts, but nearly all of them call for some explanation.

1. Barwar Anjanah was a large tract of mostly uninhabited forest country which included the present parganahs of Alamnagar, Pihání-Padaruá in the Hardoí district and Pasgáṇw, Muhamdi, Magdápúr, Aurangábád, and Atwá-Pipariá in Kheri. It is said that the second name is properly Anjánah "unknown" so-called from the wild nature of the country, but this is doubtful. It was one large estate held by the Sayyids of Barwar. [In tracing the divisions of Akbar through the pages of the Settlement reports and the *Gazetteer* I have been much impeded by the fact that the writers are all deeply interested in the history of the great proprietary clans and only give geographical notices under those heads, so that one has to hunt up a parganah through a dozen notices.]

3. Pálí included the present parganahs of Shahábád and Pachhohá and part of Saromannagar and Katiárí.

5. Basrah, was apparently a very small parganah and it is remarkable that no revenue is assigned to it in the text. It is not to be found on the map nor is it mentioned in the O. G.

6. Bhurwárah, a vast and undefined mahal which appears to have included the present parganahs of Bhúr, Haidarabad, Aliganj and par-

haps also Paliá across the Chauká or so much of it as was inhabited at that time. In the north of the Kheri district we get into the jungles again as in Bahráich and exact boundaries are not to be expected.

7. Bisárá, there is a small parganah of this name west of parganah Kheri, there is no notice of it in the O. G. unless perhaps it may be alluded to casually in some of the long accounts of Rajpút and other clans of which that work is full, to the exclusion of more precise information.

8. Paila still extant, it included also Karanpúr to the north.

9. Chhitiápúr is the old name of Sitápúr.

11. Sándí appears to have included so much of Katiari as was not in Palí, but where the line is to be drawn is not known.

17. Kharkhilá, The spelling is that of Blochmann's text, but it appears it should be Karkhila and not Khar. The modern name is Karaoná, and the first syllable is said to be the Sanskrit *kara* = a hand ; there is a legend about a Raja who lost his hands and had them restored by bathing in a sacred tank at this place.

18. Khánkhatman is now in the Farukhábád district of the N. W. P.

21. Nimkhár. There is now no parganah of this name though the ancient and sacred town of Nimkhár or Nimsár is still in existence. This large estate comprised the modern parganahs of Aurangabad, Misrikh, Maholí, Kasta-Abgánw, and Sikandarábád forming a long narrow strip running from north to south in the Sítápúr and Kheri districts.

The remaining parganahs are still extant and probably very nearly their former extent, though there have been here and there a few transfers of villages from one to another.

In Nos. 3, 4, 6, and 17, the ruling clan is given as Asanín or Ahanín with variants Asín and Ahín. I would read in all these cases Ahbans. In the Persian character آسنین or اهنین is very like اهبنس and may easily have been mistaken for it. The Ahbans were a powerful proprietary tribe in western Oudh for many centuries. I am in doubt as to the name کهنه in No. 16. It may be for کُهنبي Khumbí. There are one or two parganahs unaccounted for in the Aín. These are :

I. Barwan, between Páli and Sándí. In the Hardoi S. R. p. 95 it is said that Barwan is mentioned in the Aín and the writer gives its area and revenue. I do not know where he got this information as there is no mention of Barwan in Blochmann's text, nor is there any mahal having the area or revenue quoted in the S. R.

II. Chandra. In the Sitapúr S. R. p. 85 it is stated that the old name of this parganah was Haveli. But the Haveli or home county of this Sarkár is Khairabad which is separated from Chandra by Nimkhár and Sitapúr. Some changes of villages from one parganah to another

have occurred since Akbar's time, and it is possible that Chandra may have formed part of the Haveli mahal of Khairabad. I have shewn it in the map as uncertain.

IV. Gundlamau. This parganah is not in the Ain and my authorities give no information on the subject. I presume it was part of the great Nimkhár estate but have shewn it in the map as uncertain.

This Sarkár it will be seen includes the whole of western Oudh. In the southern part the mahals are generally clearly traceable and well defined, but in the north the great submontane forest appears to have been only sparsely peopled and to lay down definite boundary lines on the map would not only be impossible, but would convey an erroneous impression by making precise divisions which were not in existence in the time of Akbar. Kheri on its northern side, Khairigarh and Bhurwára have therefore been left unmarked by boundary lines and I am very doubtful about the northern boundary of Killá Nawagarh and Firozabad which adjoin them.

It only remains to observe that special interest attaches to Láharpúr in this Sarkár from its being the birthplace of the illustrious financier Raja Todar Mal, the author of the great revenue settlement whose features we are now endeavouring to restore.

V. Sarkar Lakhnau.

55 mahals. 3,307,426*b*. 2*b*. 80,716,160*d*. 4,572,526*s*. Castes various. 2,680 horse, 36 elephants, 83,450 foot.

1. Abethí. Fort of burnt brick. 117,381*b*. 3,076,480*d*. 3,002,17*s*. Ansáris. 300 horse, 20 elephants, 2,000 foot.
2. Unám. Has a brick fort. 61,045*b*. 2,012,372*d*. 2,537,475*s*. Sayyids. 50 horse, 4,000 foot.
3. Isauli. Fort of burnt brick on the banks of the river Gúdi. 1,670,093*b*. 4,208,046*d*. 240,846*s*. Bachgoti Rajpúts. 50 horse, 2,000 foot.
4. Asewan. 57,726*b*. 830,625*d*. 63,421*s*. Bais and Chandel. 10 horse, 500 foot.
5. Asoha. 25,027*b*. 509,901*d*. Ahanín (?). 400 foot.
6. Unchhgánw. 33,122*b*. 417,957*d*. Bais. 100 horse, 2,000 foot.
7. Bilgránw. Fort of burnt brick. 5,124,113*b*. 356,892*d*. Sayyids and Bais. 20 horse, 1,000 foot.
8. Bangarmau. Brick fort. 242,291*b*. 3,802,122*d*. 151,481*s*. Gahlot Rájputs. 2,000 foot.
9. Bijlor. 80,581*b*. 2,505,047*d*. 193,961*s*. Chauháns. 30 horse, 1,000 foot.
10. Bárí. 70,590*b*. 1,284,799*d*. 51,560*s*. Bais. 30 horse, 1,000 foot.

11. Bahrimau. 19,409*b*. 3*b*. 591,406*d*. Bais. 20 horse, 500 foot.
12. Pingwán. 34,727*b*. 420,832*d*. 12,730*s*. Bais. 500 foot.
13. Bithaulí. 8,736*b*. 8,194*s*. 340,191*d*. Rajputs and Jats. 200 foot.
14. Panhan. 8,945*b*. 267,809*d*. Bais. 300 foot.
15. Parsandan. 9,111*b*. 237,537*d*. Rájputs and Khumbís. 200 foot.
16. Pátan. 5,621*b*. 214,255*d*. Bráhmans and Khumbís. 400 foot.
17. Tará Shikaur. 9,357*b*. 123,534*d*. Brahmans. 300 foot.
18. Jhalotar. 61,774*b*. 1,123,176*d*. 21,441*s*. Chandels. 20 horse, 2,000 foot.
19. Dewe. Fort of burnt brick. 88,638*b*. 1,933,837*d*. 174,207*s*. Rajputs. 30 horse, 2,000 foot.
20. Deorakh. 13,340*b*. 9*b*. 689,536*d*. Bais. 100 horse, 1,500 foot.
21. Dadrah. 10,796*b*. 73,737*d*. Rajpúts. 50 foot.
22. Rambharpur. Fort of burnt brick. 75,490*b*. 2,425,775*d*. 79,225*s*. Bais and Bráhmans. 100 horse, 2,000 foot.
23. Rámkot. Fort of burnt brick. 9,790*b*. 267,099*d*. Rajputs. 200 foot.
24. Sandílah. Fort of burnt brick. 3,937,200*b*. 10,623,901*d*. 837,245*s*. Gahlots and Báchils. 100 horse, 5,000 foot.
25. Sáipúr. 39,083*b*. 15*b*. 2,625,388*d*. 27,736*s*. Chandel Rájputs. 40 horse, 1,000 foot.
26. Sarosí. 25,710*b*. 1,239,767*d*. 1,567*s*. Chandel Rájputs. 20 horse, 1,000 foot.
27. Sátanpur. 60,600*b*. 1,028,800*d*. 10,192*s*. Bais and Brahmans. 50 horse, 2,000 foot.
28. Sihálí. 13,065*b*. 694,707*d*. 130,216*s*. Rájputs. 10 horse, 500 foot.
29. Sidhaur. 35,794*b*. 1,692,281*d*. 313,022*s*. Afghans (?) and Rájputs. 100 horse, 1,000 foot.
30. Sidhúpúr. 9,371*b*. 4*b*. 505,018*d*. Bais. 150 horse, 1,500 foot.
31. Sandí. 7,852*b*. 9*b*. 392,313*d*. 13,792*s*. Rajputs. 1,000 foot.
32. Saron. 5,576*b*. 210,316*d*. 2,858*s*. Rajputs and Khumbis. 100 foot.
33. Fatihpur. Fort of burnt brick. 19,830*b*. 3,161,440*d*. Shekhzádas and Rajputs. 200 horse, 5 elephants, 2,000 foot.
34. Fatihpúr Chaurásí. 105,952*b*. 909,176*d*. 6,594*s*. Rájputs *and* (!) Chandels. 10 horse, 500 foot.

35. Gaṛh Ambiṭhí. Fort of burnt brick. 47,356*b*. 1,800,000*d*. Bahmangoti Rajputs. 250 horse, 8 elephants, 5,500 foot.
36. Kursi. Fort of burnt brick. 80,817*b*. 1,693,844*d*. 62,919*s*. Rajputs. 60 horse, 3 elephant, 2,000 foot.
37. Kákorí. Fort of burnt brick. 31,574*b*. 1,134,432*d*. 14,430*s*. Bisen Rajputs. 30 horse, 500 foot.
38. Kahanjarah. 22,300*b*. 818,472*d*. Bais. 100 horse, 2,000 foot.
39. Ghátampúr. 27,390*b*. 552,561*d*. Brahmans. 500 foot.
40. Kachh Ando. 22,066*b*. 430,596*d*. 4,460*s*. Chandels. 500 foot.
41. Garandá. 4,803*b*. 334,769*d*.
42. Kúmbhí. 5,940*b*. 267,089*d*. Rajputs. 400 foot.
43. Lakhnau bá Havelí. 91,722*b*. 1,746,771*d*. 241,195*s*. Shekhzádahs, Bráhmans, and Káyaths. 200 horse, 3,000 foot.
44. Lashkar. 16,794*b*. 167,529. Bais. 4,000 foot.
45. Maliḥábád. Fort of burnt brick. 169,269*b*. 4,479,250*d*. 108,545*s*. Bais. 30 horse, 2,000 foot.
46. Maláwah. 83,022*b*. 3,598,713*d*. 222,038*s*. Bais. 30 horse, 2,000 foot.
47. Mohán. Fort of burnt brick. 60,990*b*. 1,996,673*d*. 198,484*s*. Bais Rajputs. 30 horse, 2,000 foot.
48. Moránw. Brick fort. 68,847*b*. 1,698,444*d*. 4,806*s*. Bais Rajpúts. 150 horse, 2,000 foot.
49. Maḍiánw. 49,422*b*. 1,136,613*d*. 32,900*s*. Baswár and Barkalá (?). 30 horse, 500 foot.
50. Mahonah. 50,895*b*. 977,860*d*. 8,805*s*. Rájputs. 50 horse, 2000 foot.
51. Manwí. Fort of burnt brick. 29,500*b*. 771,372*d*. 13,767*s*. Musalmáns and Rájpúts. 2,000 foot.
52. Makráiḍ. 17,959*b*. 576,200*d*. 5,247*s*. Bais Rájputs. 1,000 foot.
53. Haḍhah. Brick fort. 11,734*b*. 359,748*d*. 6,026*s*. Bráhmans. 300 foot.
54. Haihar. 13,109*b*. 329,735*d*. Bais. 30 horse, 500 foot.

The greater number of the mahals in this sarkár are still extant and have been identified by Mr. Millett in the Sultanpúr S. R. Those portions which lie in the Bara Banki district present some difficulties owing to the absence of all historical data from the S. R. of that district; the writer of which says he leaves such matters to the compiler of the *Oudh Gazetteer*. The O. G., however, merely copies the scanty notes of the S. R., so we are left in the dark.

1. Abethí is now spelt Amethí. The original word appears to have been Ambishṭhi which would give either spelling in its Prákrit form. The parganah is now known as Mohanlálganj, the town retains the old name.

5. Asohá is now combined into one parganah with Parsandan No. 15.

6. Unchhganw. This mahal with Tara Singhaur (which appears to be the true reading for Bárá Shikaur of Blochmann's text) No. 17 and Sidhúpúr No. 30, has since Akbar's time been made into the one parganah of Daundia Khera.

7. Bilgránw or -grám is the site of the famous battle in A. D. 1540 where Humayun was defeated by Sher Shah. The mahal included the modern parganah of Bangar. O. G. I. 223.

9. Bijlor is now written Bijnor. The *l*, however, is right, as the original word seems to have been Bijlipúr.

11. Bahrimau or Pahrimau was the old name of Pírnagar.

12. Pingwán or Bangwán I cannot find anywhere. Perhaps the local officers can enlighten me.

13. Bithauli. Spelt in the O. G. Bhitauli. The town is on the Doab between the Gogra and Chauka but it is difficult to define the boundaries of this mahal and Sailak in Sarkár Avadh (*vide supra*).

20. Deorakh. This mahal also I cannot find.

21. Dadrah appears to account for a portion of the blank space in the Bara Banki district not covered (as far as can be seen) by any name in the Aín. This space is now divided betweeen the Nawábganj and Partábganj parganahs both of which, however, are of very recent creation.

22. Rambhirpur is now called Purwá, the last half of the old name Rambhirpurwá with the Eastern Hindi lengthened nominative.

23. Ramkot lies all by itself in the middle of Khairábád. This Sarkár has several detached portions besides Ramkot, *viz.*, Garh Amethi and Isauli in S. Avadh, Hardoi in S. Manikpur and perhaps Bithaulí in Bahráich.

24. Sandílá appears to have included Bálámau. O. G. I. 209.

25. Sáipur is also known as Safipúr.

26. Saron the old name of Sikandarpur near Unao.

27. Sátanpur the old name of Khiron.

28. Sihalí, still a town in parganah Fattihpur of Bara Banki.

31. Sandí, now called Sissaindi, this is probably the proper name for which Sandi is a copyist's error.

38. Kahanjarah, not traceable.

41. Garandá, probably the same as Gundwa or Gonda. The text گرند may be an error for گوند.

42. Kumbhi, not traceable.

44. Lashkar said to be for Nisgarh, which is said to be a well-known village (Sultanpur S. R. s. v.) the position, however, is not stated.

48. Moránw is now spelt Mauránwán, an E. Hindi dialectic form.

49. Madiánw now Madiánwán. This is now included in Mahona.

54. Haihar is not traceable.

All the others are still extant. Modern parganahs not in the Aín, and not clearly identifiable are Nawabganj, Partabganj, Surajpur and Mawai Maholárá, the last of which, however, probably belonged to Sarkár Avadh.

This Sarkár, the richest and most cultivated of the whole, occupies the south-west portion of the Subah with certain outlying patches, and includes within its boundaries the *enclave* of Satrikh.

The Dastúrs, which appear to have been somewhat similar to modern Districts (see Elliot, Races of N. W. P., Vol. II, p. 201) are as follows: (Aín, Text, Vol. I, p. 352.)

Sarkár Avadh. 19 mahals, 2 of which are included in Khairábád. These two, however, are not specified. All the mahals of the Sarkár except two form the 1st dastúr. Ibrahimábád alone forms the 2nd dastúr, and Kishni alone the 3rd.

Sarkár Bahráich. Firozábád and Sultánpúr 1st dastúr. Kahronsa, 2nd dastúr, and all the rest the 3rd.

Sarkár Khairábád. 1st *d.* Haveli, Bisárá, Biswah, Basrah, Chitiapúr, Khairigarh, Sadupúr, Kheri, Karkhilá, Láharpur, Machhrahtá, and Hargaon.
2nd *d.* Páli, Barwar-Anjaná, Báwan, Sándí, Sarah, Gopámau, and Nimkár.
3rd *d.* Bhurwárah and Pailá.

Sarkár Gorakhpúr. Constituted one dastúr.

Sarkár Lakhnau. 2 dastúrs. Unám, Bilgrám, Bangarmau, Hardoi, Sultánpúr, Fatihpur-Chaurási, Kachhand and Maláwah form one dastúr, and all the rest the other.

I have excluded from this review all those portions of the present province of Oudh which did not lie within the Subah of that name. These will be dealt with under Subah Iláhábás. They are parts of Rai Bareli, Partábgarh (nearly the whole), Sultánpúr and Faizábád. It will be seen that there are a good number of uncertain points, and my map cannot be accepted as anything but a first attempt. I trust, however, that it will be useful in one way; it is not until you come to construct a

map, and find yourself forced to account for every inch of the tract included, that you find out the gaps in your information. These I have now indicated, and I conclude with again expressing a hope that local officers interested in the history of the province will come forward with information which may clear up all the doubtful points.

Baiswári Folk Songs collected by Bábú Jogendra Náth Rae, *Gházipur.*
(Contributed by W. Irvine, Esq., C. S.)

[The following songs are composed in the Baiswári dialect, with a slight admixture of Western Bhojpúri. They were collected by Bábú J. N. Rae in the town of Gházipur. He says that he took them down, exactly as repeated, from the mouths of women of the lower castes, such as Kahárs, etc. Some songs were obtained from Gáthaks or male professional singers, who recited them, and whose words were taken down. The Bharthari song was obtained from the dictation of a Gosain mendicant.—The text has been edited by Mr. G. A. Grierson, C. S., who has added a few notes, distinguished by his initials (G. A. G.). The translations have also been amended in several places, where they represented the original either incorrectly or too freely.—Ed.]

॥ १ ॥ सोहर गीत ।

१ भउज मेा को चूनरी पहिनाव
भइया साहेब मुखड़ न बोले
भउजी ओठ बिजुकाई
गरभ की माती डेहरिया चढ़ि बैठो
ननद लुटन मोहि आई
भउज मेा को इत्यादि

२ कठिया धरवनी मैं टठिया लेबों
आँख अँजवनी खोरा
हसन खेलन को मैं चेरिया लेबों
सइयाँ चढ़न के घोड़ा
भउज मेा को इत्यादि

Note. भउज is more usually भाउज, and is possibly incorrect. चढ़ि is a dialectic form of चढ़ि. G. A. G.

Translation.

1, O sister-in-law, dress me in a bordered garment.
My brother did not even utter a word [*lit.* speak with his mouth],

My sister-in-law with pouting lips
And a proud face moved away and sat on the doorway, (saying:)
"Lo! sister-in-law is here to rob me."
O sister-in-law, dress me, etc.

2, I shall take a plate as a present for the *Chhath*,*
A cup for holding lamp-black for the eyes (of thy babe),
I shall take a waiting-maid to laugh and play with thy child,
I shall take a horse for thy husband to ride upon.
O sister-in-law, dress me, etc.†

॥ २ ॥ सोहर गीत।

नन्द घर बाजे बधइया
मथुरा कृष्ण को जन्म भयो है
गोकुल बाजे बधइया
रानी जसमत जी को ठोटा जनम्यो
सखियन मङ्गल गइया
नन्द घर बाजे बधइया,

NOTE. ठोटा, 'a little child', is generally used affectionately to mean 'a dear little child'. G. A. G.

Translation.

Birth-music is being sounded in the house of Nand.
At Mathurá Krish'n is born
And birth-music is sounded at Gokul.
To Queen Jasmat (Jasodá) a son is born.
All the attendant ladies sing songs of jubilee.
Birth-music is being sounded, etc.

The legend of the birth of Srí Krish'n is so well-known that it requires no notes to describe how he was born at Mathurá and thence

* A ceremony held in honour of the goddess *Chhath* a month after the birth of a child. It is on this day that the mother leaves the room where she was confined for the period; she is thenceforth considered as pure and capable of performing all the household duties and mixing freely with the inmates of the house. [The ceremony was originally performed on the sixth day after birth, hence its name. G. A. G.]

† [*Bhâûj* sister-in-law, *i. e.*, brother's wife; but *nanad* sister-in-law, *i. e.*, husband's sister. The idea of the piece is this: *nanad* goes to visit *bhâûj* on the sixth day after the birth of the latter's son. *Bhâûj* is sulky and says, "*nanad* has come to rob me of my child". *Nanad* remonstrates and says, she is come to make presents. There is a reference to the proverbial jealousy between sisters-in-law. Each is much displeased when the other has a child, but at the same time she is bound to give the mother handsome presents, in order that when her turn comes, she may get still handsomer ones.—ED.]

transported secretly to Gokul to the house of Nand, how this precaution was taken in order to save the child from falling into the hands of Kans, the wicked uncle and king of Mathurá, and how his real parents were confined in a black dingy den where the future hero was born.

Sohars are songs that are sung on the occasion of a birth. The women of the neighbourhood all muster together and make themselves jubilant over the interesting occasion. There is no end of *ḍholaks* (drums) being beaten with all the might of their bravery.

॥ ३ ॥ होली गीत ।

१ पिचुकारिन काहँ को मारि, लला हो
रङ्ग की चोट मोहि कारी लगत
पिचुकारिन काहँ इत्यादि,
२ भर पिचुकारी मेरे मुख पर मारी
अँगिया भिजि तन सारी, लला हो
रङ्ग की चोट मोहि कारी लगत
पिचुकारिन काहँ इत्यादि

NOTE. कारी here = भारी, 'severe', of a wound &c. G. A. G.

Translation.

1, Why dost thou spurt with a syringe? Ho Lalá!
It strikes hard against me—the liquid red.
Why dost thou spurt, etc.
2, The full syringe thou dost pour on my face—
My entire bodice and body have got wet, Ho Lalá!
Why dost thou spurt, etc.

Holí songs are peculiar songs that are sung on the occasion of the celebrated festival known as the Holí which, as is well-known, is solemnized in honour of Krish'nji. [It is rather the festival in honour of the Uttaráyaṇa or Vernal Equinox. G. A. G.]

॥ ४ ॥ चइती गीत ।

१ चइत की चाननि रतियाँ
ए री निरखत भई भोर,
मोरे रामा हो, चइत इत्यादि
२ ए री सइयाँ मोर चन्दा भइलें,
ए री मैं तो भइलों चकोर
मोरे रामा हो, चइत इत्यादि

NOTE. ए री is an interjection only used in addressing females. The masculine form is ए रे. The चकोर, *chakor*, is the Greek partridge *(Perdix rufa)*, which is said to be enamoured of the moon, and to exist on moonbeams and ambrosia. G. A. G.

Translation.

1, Gazing at the moonlit night of (the month of) Chait,
It has become well-nigh dawn;
O my Rámá, gazing at the moonlit night, etc.
2, Lo, my husband has become the moon,
And lo, I have become the *chakor*.
O my Rámá, gazing at the moonlit night, etc.

॥ ५ ॥ चइती गीत।

१ ए री तङ्ग भइली चोलिया रामा
ए री नाजुक बहियाँ ना समाय
मोरे रामा हो, तङ्ग भइली इत्यादि
२ सुनु रे दरजिया के छोकड़े
तू तो निपटे नदान
मोरे रामा हो, तङ्ग भइली इत्यादि

NOTE. नाजुक is the Persian نازک and नदान is نادان. G. A. G.

Translation.

1, Lo, my bodice has become tight, O Rámá,
It does not fit my tender arms;
O my Rámá, my bodice, etc.
2, Hark, son of the tailor,
Thou art excessively foolish!
O my Rámá, my bodice, etc.

॥ ६ ॥ कजरी गीत।

काहँ मोरि सुधि बिसराए परदेसिया
१ आपु तो जाय बिन्द्राबन छाए
लिख लिख जोग पठाए परदेसिया
काहँ मोरि सुधि इत्यादि
२ आपु तो जाए द्वारिका बइठे
कुबरी से नेह लगाए परदेसिया
काहँ मोरि सुधि इत्यादि

Translation.

O my beloved, why dost thou forget me in the foreign land?

1, Thou hadst gone and settled in Bindrában,
And from time to time sendedst letters of *jog* from the foreign land.
O my beloved, why dost thou forget me, etc.

2, But now thou hast gone and residest in Dwáriká,
And makest love with the hunch-backed woman in the foreign land.
O my beloved, why dost thou forget me, etc.

When Krish'nji left Rádhikáji he went over to Dwáriká and there assumed the title of a king; there he is said to have fallen in love with a certain hunch-backed woman known in Hindú mythology as Kubjá or Kubrí. There is a legend to this effect that by the touch of the divine hands of Krish'nji this ugly creature was transformed into a most beautiful woman of graceful form and figure. In this song Rádhiká alludes to this awkward intrigue of her lover and twits him with his faithlessness.*

॥ ७ ॥ कजरी गीत।

पुरुब के देसवा से अइलें बनिजरवा रामा
डेरा डाले सुन्दर के अँगनवा रे हरी
सगरौं अँगनवा छेकेला बनिजरवा रामा
कैसे क बोहारौं घर अँगनवा रे हरी
टारी देऊ गोंदिया उलाटि देब बखरवा रामा
निऊरि बोहारौं घर अँगनवा रे हरी
अँगना बोहारत मोरा उड़ल अँचरवा रामा
देवरा पापी निरखै मोर जोबनवा रे हरी
अइसन देवरवा के फँसिया रे दियौंबूँ रामा
जब रे घरवा हेतैं छूरी बजवा रे हरी

* [' Letters of *jog* ' apparently means letters on the subject of practising asceticism. Mr. Grierson points out a parallel passage in a song of Súr Dás, in which that poet recounts a number of beneficent acts traditionally ascribed to Krish'n, such as his assistance to the Páṇḍavas, his protection of Draupadí, the destruction of Hiraṇyakaśipu, etc. Among them the poet adds: *ápu jáï Dwárká baithe likhi likhi jog pathái.* The same statement also occurs in another of Súr Dás' songs, in which Rádhá is represented as complaining about Krish'n that while he himself is indulging in amorous intercourse with Kubrí and the Gopís, he exhorts her to devote herself to the practice of asceticism: *ap ne jáï prem ras chákhe ham ko likhi likhi jog pathávee, i. e.*, 'while he himself is gone (to Gokul) to enjoy the sweets of love, he writes to me to recommend asceticism.'—Ed.]

NOTE. बनिजरवा is long form of बनिजार, 'a merchant'. I would prefer to consider देइ in the fifth line, as the 2nd singular imperative. बखरवा is long form of बखार, which literally means 'a granary.' G. A. G.

Translation.

From the eastern land came a merchant, O Rámá.
He took up his lodgings in Sundar's yard, O Hari.
The merchant has filled up the entire yard, O Rámá.
How shall I sweep the dust of the yard with my broom, O Hari?
I will push away the trappings of the oxen and cast away the sacks, O Rámá.
And I shall sweep the yard bending myself down, O Hari.
While sweeping the yard the skirts of my cloth flew away, O Rámá.
And my wicked brother-in-law began to gaze on my breast, O Hari.
I would get such a brother-in-law killed, O Rámá.
If my "knife-thrusting" were at home, O Hari.

"Knife-thrusting" here refers to her husband, because he is her natural protector and as such could deal vengeance.*

The Kajarís are sung during the rainy season. They were formerly indigenous to Mirzápur but are now spreading far and wide over the land. The airs of these songs are rather melancholy, though they are tuned to express different feelings and sentiments.

[The name of the song is probably derived from the darkness of the clouds at this season, which are considered to resemble *kájar* or lamp-black collyrium. The well-known author of the treatise called *Hindí Bhákhá*,—Bábú Hariśchandra—gives a different account. He says that there was in Central India a famous Rájpút prince named Dádú Ráy, in whose time no Musalmán dared touch the Ganges. On a famine occurring in his dominions, he brought rain by the ardour of his devotions. This made him so popular that when he died and his Queen Nág'matí became *satí* with his corpse, the women of the country invented a new melody which was named *Kajalí* to express their sorrow. The author concludes "there are two reasons for the name *Kajalí*;—one, that the king owned a forest called *Kajalí ban*, and the other, that the third of the month on which this song is most sung is called in the *Puráns*, the *Kajjalí tíj*. G. A. G.]

॥ ८ ॥ जँतसार गीत।

१ बारह बरिसवा को मैना रे तिरियवा रे
तेरहे बरिसवा गोबिन्दा आसिक रे ना

* [*Chhúrí-baj'wá* is the long form of *chhúríbáj*, a compound of *chhúrí* 'knife' and *báj* (Persian باز) 'one who is practised in something.'—ED.]

२ अपने ओसरवाँ मैना भार लम्बी केसिया रे
गोविन्दा सँवारे टेड़ी पगड़ी हो ना
३ मैना जो चले लागी अपने ससुरवाँ रामा
पिछवाँ रे पिछवाँ गोविन्दा आसिक हो ना
४ फिरि चलु फिरि चलु गोविन्दा असिकवा रे
सवन भदउवाँ हम चलि आइब हो ना
५ सवन भदउवाँ की निस अँधिअरिया रे
बिजुली चमके जियरा मारे हो ना

NOTE. आसिक is the Arabic عاشق. G. A. G.

Translation.

1, The girl Mainá is of twelve years,
Her lover Gobindá is of thirteen.
2, In her parlour Mainá combs her long hair,
Gobindá adjusts his slanting turban.
3, When Mainá was going to her father-in-law's house, O Rámá,
The lover Gobindá followed close behind her.
4, "Go back, go back, my beloved Gobindá.
"I shall return in Sáwan or Bhádõ.
5, "The nights of Sáwan and Bhádõ are dark,
"The lightning flashes, and it pierces my heart."

In order to lighten the labour caused by incessant grinding of mill-stones, the women of these parts sing songs in a concert. Two women sit face to face with their legs spread and their arms holding tight the fulcrum of the grinding-stone.

॥ ९ ॥ भैरवी गीत ।

१ सइयाँ दरवजवा ठाड़ि रहूँ
पिया मिलन की भई बेरिया
दरवजवा इत्यादि
२ ताव पिया को बेग मिलाओं
निकस जात जी हाँ रे पिया
दरवजवा इत्यादि

NOTE. ठाड़ि is dialectic for ठाढ़ि.

Translation.

1, O my husband, I am standing (waiting) at my door,
The time of meeting with my dear one has come,
I am standing, etc.

2, Until I am immediately united with my beloved,
My soul is on the point of forsaking me, O my dear one!
I am standing, etc.

॥ १० ॥ भैरवी गीत।

१ रामा! मोहि कल ना पड़त जिया मैं
याद आवे उन की बतिया
मोहि कल ना पड़त जिया मैं
२ छन छन उठतु भरोठे ठाढ़ि रे
पीर उठत हिया मैं
कल ना पड़त जिया मैं

NOTE. कल पड़ब usually means 'to sleep.' कल is 'rest', कल ना पड़त is literally 'rest does not fall.' उठतु is an old form of उठत. भरोठ or more usually भरेठ is literally 'a lintel.' भरोठे is locative. G. A. G.

Translation.

1, O Rám, a disquiet comes over my soul,
When I call to remembrance his words.
A disquiet comes, etc.
2, Every moment I get up to stand by the door,
And a pain rises up in my heart.
A disquiet comes, etc.

॥ ११ ॥ भैरवी गीत।

१ नजर लगी रे मो का राम
चलत अँगनवा मोरे राम
नजर लगी इत्यादि
२ अँगिया मसक गई चुड़िया तड़क गई
गिर गयो हाथे का कँगनवा
नजर लगी इत्यादि

Translation.

1, O Rám, have any evil eyes fallen upon me
When I was passing along the yard?
Have any evil eyes, etc.
2, My bodice has got loose, the *churis* (hand-bangles) have been shivered,
The bracelets of my hands have fallen down.
O Rám, have any evil eyes, etc.

॥ १२ ॥ भैरवी गीत।

१ पनिघटवाँ रोके ठाड़
कैसे भरूँ पनियाँ रे गोइयाँ !
पनिघटवाँ इत्यादि

२ एक डर मोहे सास ननद की
दूजे बैरन मोरी सौतिनियाँ
पनिघटवाँ इत्यादि

Translation.

1, He stands obstructing the steps leading to the waters.
How then, my friend, can I fill my pails ?
He stands obstructing, etc.

2, I am already afraid of my mother-in-law and sister-in-law,
Over and above are the other wives of my husband.
He stands obstructing, etc.

॥ १३ ॥ भैरवी गीत।

१ सइयाँ अँखियाँ नहिँ लागी रे
समुझि समुझि उन की बतियाँ
अँखियाँ इत्यादि

२ आवन कहि गये, अजहूँ न आए
किन सौतिन बेलमाए
सइयाँ अँखियाँ इत्यादि

Note. किन = कौन. G. A. G.

Translation.

1, Lo, I have not set eyes on my husband,
And yet full well I remember his promise.
Lo, I have not set eyes, etc.

2, He went away with a promise to come, but up to this day he has not come.
What evil woman has deprived me of him ?
Lo, I have not set eyes, etc.

॥ १४ ॥ भैरवी गीत।

१ सइयाँ बलि जाओं मो से बोलो ना
तलफ तलफ रैन गुजारी
सइयाँ बलि जाओं इत्यादि

२ कदरपिया मैं तुम पर बारी
लपक झपक गरवाँ लागि सोएँ ना
सइयाँ बलि जाओं इत्यादि

Translation.

1, O husband I will kill myself, do speak with me.
I passed the whole night in fits and starts.
O husband, I will kill myself, etc.

2, Says Kadarpiyá, I am extremely fond of thee,
And I wish to fall on thy neck and hold thee tight.
O husband, I will kill myself, etc.

॥ १५ ॥ दोहा।

नैन नैन के जात है, नैन नैन के हेत।
नैन नैन चोरी करत, नैन नैन कहि देत॥

Translation.

The eye goeth to the eye for the sake of the eye.
The eye stealeth the eye and the eye informs the eye.

॥ १६ ॥ दोहा।

एक तो नैना बिख भरे, दूजे अञ्जन सार।
अरे बउरी कोइ देत है मतवाले हथियार?॥

Translation.

Thine eyes are already filled with poison, they are decked with lamp-black over and above.

O mad girl, does any one put a weapon into the hands of a drunken person?

॥ १७ ॥ दोहा।

अमी, हलाहल, मद भरे, श्याम, सेत, रतनार।
जियत, मरत, झुक झुक परत, जेहि चितवत एक बार॥

Translation.

(The eye is) full of nectar, poison and wine, like unto a black, white and red (lotus).

He lives or dies or falls a-trembling upon whom it glances but once.

॥ १८ ॥ दोहा ।

मन में राखों मन जले, (बच) कहूं तो मुख जल जाय ।
गुङ्गे का सपना भयो, समुझि समुझि पछताय ॥

NOTE. बच in the first line is superfluous, and spoils the metre. G. A. G.

Translation.

Being kept in the heart, the heart burns; being uttered by the mouth, the mouth burns.

It is just the dream of the dumb; knowing it well, he grieves (because he cannot express it).

॥ १९ ॥ दोहा ।

हम जाना तुम कनक हो, ता सो पहिना कान ।
कसत कसौटी नहि बनी, पीतल भयो निदान ॥

Translation.

I thought thou wert gold, hence I put thee on my ears.

It produced no marks on the touch-stone and became only a heap of brass.

॥ २० ॥ दोहा ।

कागा चुन चुन खाइयो, (तू) तन कर सारा मास ।
दूनो नैन बचाइयो, पिया मिलन की आस ॥

NOTE. तू in the first line is superfluous and spoils the metre. G. A. G.

Translation.

(The dead exclaims :)

O daw, thou might'st peck and eat up the entire flesh of my body;

But pray leave alone these two eyes of mine, for still I have hopes of seeing my beloved.

॥ २१ ॥ दोहा ।

प्रीतम पाती लिखि नहीं, गए बहुत दिन बीत ।
अब से जाना आप को, मुख देखे की प्रीत ॥

Translation.

O my beloved, thou hast not written a (single) letter to me, and many days have passed.

Henceforth I understand thee, thy love depends on seeing my face.

॥ २२ ॥ दोहा ।

ए नैना ! तोहें पटक देउं, (की) चूर चूर उड़ जासु ।
काहु देख जर मरत, काहु देख जुड़ासु ।

Note. की in the first line is superfluous. There is a syllable short in the first half of the second line. G. A. G.

Translation.

O eye I shall throw thee down, so that thou mightst crumble into pieces,

(Because) thou burnest on seeing some, and thou becomest soothed on seeing others.

॥ २३ ॥ झूमर गीत ।

दे ढालो सवत मोरी बेंदिया
जब तू चखतर बेंदिया ना देहो
ता पर मारों कटरिया
सवत मोरी बेंदिया

Note. चखतर is the Persian اختر 'a star'. G. A. G.

Translation.

O co-wife give me my *bĕdiyá.*
If thou dost not give me the starry *bĕdiyá,*
I shall drive a dagger through thy body.
O co-wife give me my *bĕdiyá.*

Jhúmar songs are sung on the occasion of marriage, in Gangá pújá and on other occasions of joy. Like the Sohar they are sung by the women. The *tikuli* is the spot of silver or a piece of glass worn on a woman's forehead.

॥ २४ ॥ झूमर गीत ।

सइयाँ मो से रतियाँ दगा कीनो रे
१ राति कहे सइयाँ कुसमी रङ्गा दीहों
धानी रङ्गा दीन्हो रे
सइयाँ मो से इत्यादि

२ रति कहे सइयाँ भुलनी गढ़ा दीहों
नाहीं गढ़ा दीन्हो रे
सइयाँ मो से इत्यादि

NOTE. दगा is Persian دغا. *Kusum* is a bright red dye, and *dhání* a pale pink. G. A. G.

Translation.

My husband played me false during the night.

1. Last night my husband said he would dye (my cloth) with *kusumí* colour,
But he dyed it with *dhání* colour.
My husband played me false, etc.

2. Last night my husband said he would make me a pendant for my nose-ring,
But he did not make it.
My husband played me false during the night.

॥ २५ ॥ झूमर गीत ।

१ समुझा देखो राजा रे बोला करे
बोला करे ना बतोला करे
समुझा देखो इत्यादि
२ सोने के थरिया में जेवना परोसों
जेवना न जेंवे बतोला करे
समुझा दे इत्यादि
३ झझर गड़ुआ गङ्गा जल पानी
पनिया न पीवे बतोला करे
समुझा दे इत्यादि
४ चुन चुन कलियाँ मैं सेज बिछाओं
सेजिया न सोवै बतोला करे
समुझा दे इत्यादि
५ लौंगा खिलि खिलि बिरवा लगाओं
बिरवा न कूँचे बतोला करे
समुझा दे इत्यादि

Translation.

Admonish him, oh king, that he converse with me:

1. Yes, converse with me and not chaff with me.
Admonish him, etc.

2. I give him food on a golden dish,
(But) he does not eat, he only chaffs with me.
Admonish him, etc.
3. I give him Gangá water in goblets and jars to drink,
(But) he does not drink, he only chaffs with me.
Admonish him, etc.
4. Selecting the finest blossoms I prepare a bed for him,
(But) he does not lie down, he only chaffs with me.
Admonish him, etc.
5. Selecting the finest cloves I prepare betel for him,
(But) he does not chew them, he only chaffs with me.
Admonish him, oh king, that he converse with me.

॥ २६ ॥ बिरहा गीत ।

ताल मैं जे चमकेला ताल के मछरिया
रन मैं जे चमके तरुआर
दस पाँच बीच मैं सइयाँ के पगड़िया
सेज पर टिकुली हमार

Translation.

As the fishes shine in the tank;
As the sword shines in the battle-field;
So does the turban of my husband in the midst of many men;
So does my *ṭikulí* shine on the bed.*

The Biraha songs are peculiar to the Ahírs (milkmen) of this part of the country.

॥ २७ ॥ लावनी गीत ।

हम पछी परदेस मो साफिर फिरते सैलानी
रहे तुम्हारी नगरी जब लग था दाना पानी
नगर तुम्हारे रहे मुसाफिर चले ओतन अपने
बोला चाली माफ करो अब भेंट नही सपने
उड़त गगन मैं धूर सिपाही जरा तू सुन जा रे
घोर जहर का पिआला अपने हाथ पिला जा रे

* [*Tikuli*, see note to No. 23. *Das pách*, lit. "ten, five," an indeterminate number.—Ed.]

बँगाले का जादू टोना ढूँढ़ ढूँढ़ सिखती
अइसी मोहनी डाल सनम को जाने ना देती
धर घोड़े पर जीन सिपाही लश्कर को जा रे
काढ़ कमर का कटारी मेरे तन में मार जा रे

NOTE. सैलानी is derived from the Arabic سيلان, 'a walk for recreation'. It usually means 'walking at random'. चोतन is the Arabic وطن. जरा is the Arabic ذرا. सनम is the Arabic صنم. काढ़ is dialectic for काढ़ G. A. G.

Translation.

I, bird, am a stranger in a foreign land and travel at random. I remained in thy town as long as I had occasion to get food and water. I was as a traveller in thy town, and now I go to my own home. Excuse me—I will not talk to thee, we cannot meet now even in dreams. (Reply.) The sky is bedimmed with a cloud of dust—oh soldier, do listen to me a little. (Mixing) a potion of dire poison, make me quaff it with thy own hands. If I had learnt the enchantments and witchcrafts of Bengal,* I would have wrought such a magic that I could stop my lover's departure. Do harness the horse, oh soldier, and go to thy campaign. Draw the dagger from thy belt and drive it through my body.

॥ २८ ॥ पीलू गीत।

१ रामा! सगरवा बाँध ना
ए जी मोरा उतरेला बिदेसिया
रामा! सगरवा बाँधू ना ॥
२ सिकिया मैं चिरि चिरि बेड़ा रे बँधाओं
सौती बिरहिया बोले ना
रामा! सगरवा बाँधू ना

Translation.

1, O Rám, let me make a bridge over the sea.
Lo my foreign beloved is to cross over to me.
O Rám, let me make, etc.

2, I shall get a boat made by reeds cut out.
The other wife of my husband croaks out there shall be no union.
O Rám, let me make a bridge, etc.

* In Saháranpur the wandering snake-charmers and conjurors are known as *Bangálís*. The allusion may be to this name.

॥ २९ ॥ खम्माच गीत।

१ कैसे आऊँ तोरे पास री
पायल मोरी रुनुझुन बाजे
कैसे आऊँ इत्यादि
२ चटक चाँदनो रैन कदरपिया
सास ननद की लाज री
कैसे आऊँ इत्यादि

Translation.

1, How shall I come over to thee,
My anklets make a tinkling sound.
How shall I come, etc. ?
2, The moonshine illuminates the night, oh Kadarpiyá ;
I am ashamed of my mother-in-law and sister-in-law.
How shall I come, etc. ?

॥ ३० ॥ काफी गीत।

सइयाँ नहीं आए मैं क्या रे करूँ
आवन कहि गए अजऊँ न आए
की बिख खाय मरूँ
सइयाँ नहीं आए इत्यादि

Translation.

My husband has not come, what shall I do now ?
He went away with a promise to come, but up to this day he has not come.
Shall I take poison and die ?
My husband has not come, etc.

॥ ३१ ॥ काफी गीत।

सइयाँ निरमोहिया मनाए नहिं माने रे
कब की मैं ठाड़ि ठाड़ि अरज करतु हैं
प्रतनी अरज मोरी मान
सइयाँ निरमोहिया इत्यादि

Translation.

My husband is cruel, he does not listen to my entreaties;
From a long time I am standing and begging him.
Listen to these many entreaties of mine!
My husband is cruel, &c.

॥ ३२ ॥ भरथरी गीत।

जोगी हो के सइयाँ रम चले मैं जोगिन तेरे साथ ॥
साथ चले तिरिया न बने रहना* बिकट उजाड़।
चलना पड़े दिन रैन का बारे दूनी उजाड़।
जाय बसे केही नगरी में धूनी दिँगे जलाय।
ओही नगरी का राजा आवै जोगी के पास।
देखेगा सूरत तेरी रङ्गमङ्गी मन में लावेगा पाप।
तुम को बनावे पाटरानी हमें डालेगा मार।
तो दोबिधा में दोनों गए माया मिले न राम।
पूजा करो दीनानाथ की कि मोहि लगावे बेड़ा पार।
पुत्र कह भिच्छा डाल दे जोग अमर हो जाय।
समुझो क्यों न रानी श्यामदेव ॥
बोली रानी ते दिन श्यामदेव सुनु राजा मेरी बात।
जोगी हो के सइयाँ रम जाओगे चौसर खेलो मेरे साथ ॥
चौसर खेले रानी क्या करे बाजी क्या ल्यों में हाथ ॥
हारौं तो तेरे सङ्ग चलौं जीतौं जाने न दौं ॥
ऐसी बाजी रानी ना बदो ताक लिये दोनो दाव।
जो बाजी जीते श्यामदेव दस दिन रहौं बारे में।
जो बाजी जीते भरथरी तुम्हे लेगा ना साथ ॥
चौसर लिया मँगाय के खेले राजकुमार ॥
पासा लिया रानी हाथ में सुन पासा तू अरदास।
करम का सङ्ग मेरे दिजियो पड़िये सोलह औ सात ॥

Translation.

Ráni. Thou art going to wander about, O my husband, as a *Jogí* (hermit). I shall accompany thee as a *Joginí.*

* [*Na bane rah'ná*, lit. 'dwelling is not made,' idiomatic for 'it is not possible to dwell.'—Ed.]

Rájá. If a woman go with me, it will be impossible for me to live in the dreary desolate (wilderness) ; for we shall have to walk on and on, day and night, (and there will be) a double amount of trouble. When we come across a town and take rest, burning incense around us, (who knows,) the king of that town might come to (visit) the Jogí ; he will see thy beautiful ruddy face and will entertain evil thoughts. He will kill me and make thee his principal queen. So both will come to grief—earthly joys and heavenly blessings. Worship thou the Protector of the poor (*i. e.*, God), so that He may vouchsafe to me salvation.* Call me thy son, and give me alms, so that my devotions may insure to me immortality (*lit.* be immortal). Oh queen Syámdeo, why dost thou not listen to me ?

Thereupon the queen Syámdeo replied : Listen to me, O king ; if thou wilt be a hermit and wander about, play with me at dice.

Rájá. Why does the Ráni want me to play at dice, and what am I to take in my hand as a stake?

Ráni. If I lose I shall go along with thee, and if I gain I shall not let thee go.

Rájá. O queen, pray do not lay such a wager that secures both ends for thyself. (Let it be thus :) If Syámdeo win, I shall stay at home for ten days more, but if Bhar'tharí win, he will not take thee along with him.

Now the prince ordered the dice to be brought, and began to play.

The queen held the dice in her hands and said, " O dice, hear my entreaties ; give me the reward of my (good) actions and let there be a cast of 16 and 7."

This little song describes in a few words the legend of Bhar'thari, king of Nain'ghar, a place said to have been situate somewhere near Mirzapur.† The king suddenly became of an ascetic turn of mind, and was on the point of going to the woods, when the queen interposed with a view to dissuade him. But all these importunities were of no avail. The Rájá did leave his home for the woods, where he became a disciple of Gorakh'náth Bábá. This accounts for the songs relating to the life of Rájá Bhar'thari being so widely sung by the mendicants belonging to the order of Gorakh'náth Bábá. They sing these songs with a very pathetic and rueful countenance in accompaniment with the harp (sárang).

* [*Lit.*, 'so that he may ferry me across (the sea of life) in a boat.'—Ed.]

† [This legend evidently refers to the famous Bhartṛihari, said to be a brother of Vikramáditya of Ujjain, who became an ascetic.—Ed.]

॥ ३३ ॥ भजन भैरवी की ।

सनमुख राम चरन गहि लीनो ।
आवत केवट देखो है दूर ते, धन विध भाग आज मोहि दीनो ॥
चढ़ने न दीहौं नाव पग धोए बिनु, डरत न जी में महा प्रण कीनो
धन धन भाग निखाद सुरसरि तट, मारत रहो है जन्म जुग मीनो
गावें गूदर प्रभु की मरजाद है, तारो ताहि जाहि मत-हीनो

Translation.

The boatman took hold of the feet of Rám (who was standing) before him,—he had seen him coming from afar,—(and said) "the blessed Lord has given me good luck to-day; undismayed in my heart I have made a great vow that I will not let Thee get on my boat without washing Thy feet." Gudur (the author) exclaims, "Oh twice blessed is the luck of the Nishád on the banks of the Sur'sari who has spent his whole life in killing the fish. Oh Lord! thou art great, save me as thou hast saved the outcast fisherman."

The following history is connected with this song :—

Ahalyá was the wife of the venerable sage Gautam. Attracted by her beauty, Ind'r the god of the heavens and the disciple of Gautam, impersonated the form of his preceptor and ravished her in his absence. It was at last discovered and Gautam in his rage cursed both, and doomed Ahalyá to turn into a stone, till she was restored to life by the touch of the sacred feet of Rám. The redemption of Ahalyá is thus narrated in the Rámáyan: Rám and Lakshman were going to Janak in the company of the sage Viśwámit'r, and in the way, advised by the sage, Rám placed his feet on the stone, and Ahalyá was immediately restored to life. This news spread all over the vicinity, and hence when Rám wanted to cross the river Sur'sari, the fisherman was afraid lest his boat should turn into a human being, and he be thus deprived of his livelihood.

॥ ३४ ॥ गीत ईमनी ।

तुम बिनु नाथ सुने कौन मेरी
जब चाहो तब पार लगाओ
झाझर नाव बिना गुन केरी
ग्राह ग्रसत गजराज उबारेउ
धाएउ नाथ न लाएउ देरी
द्रुपती सती को चीर बढ़ाएउ
आरत बचन सुनत दया कर

सूरदास प्रभु पतितन तारेउ
हमरो बार नाथ कैसी देरी

Note. This song is, in Bihár, attributed to Tul'sí Dás, and not Súr Dás. The Bihár version is

तुम बिनु नाथ सुने कवन मेरी
गहिरी नदिया नाव पुरानी, खेवना नाव बिना गुन केरी
ग्राह गहत गजराज उबरेउ, धायेउ नाथ न लायेउ देरी
भरल सभा में लज्जा राखेउ, खींचत चीर दुसासन केरी
तुलसी दास आस चरनन के, हमरि बेरि लगायेउ अति देरी. G. A. G.

Translation.

Who will listen to me but Thou, O God.
If Thou wilt, Thou canst easily take across (*the sea of life*)
My leaky boat without tackle.
Thou didst save the life of the elephant* who was seized by the crocodile.*
Thou hastenedst (to do so), oh Lord, nor didst make any delay.
Thou didst multiply the clothes of the chaste Draupadí,†

* There is a mythological legend connected with the elephant and the crocodile. They were said to be brothers in a former life in the heavens. Both of them were heroes, and when they fell out with each other, they were cursed to assume their present form. It is said that one day when the elephant went to bathe in the river, the crocodile, not forgetting the former feud, seized the elephant by the leg in the river. When the elephant found that all efforts to extricate himself from the grasp of the crocodile were vain, he implored the mercy of Náráyan and he forthwith saved him.

† Draupadí was the joint wife of the five Páṇḍavs, the heroes of the famous epic, the Mahábhárat. The Kurus, the cousins of the Páṇḍavs, bore enmity with the latter on account of their both aspiring to the throne of Hastinápur, now called Delhi, which legally descended to the Páṇḍavs. Sakuni, the maternal uncle of the Kurus, was a very successful player at dice, and confiding in his success Durjodhan, the head of the Kurus, invited Judhishṭhir, the head of the Páṇḍavas to a play at dice, an offer which the latter could never refuse. Sakuni, on behalf of Durjodhan began to play with Judhishṭhir, and the latter lost all the games till he had lost his whole kingdom and even the freedom of his own person and his brothers. At last he was compelled to lay his wife Draupadí as a stake for the next game, and he lost her also. Duḥśásan, the wicked brother of Durjodhan, dragged Draupadí into the assembly and put her to disgrace. At last Durjodhan ordered Duḥśásan to strip her of her clothes. This was actually attempted, when she cried aloud imploring the help of her god, by whose grace she was supplied with fresh clothes as soon as the one on her person was snatched away, till a large heap of clothes was gathered in the assembly. The Kurus, finding their successive attempts to disgrace her baffled, left her alone. This event is said to have been one of the causes of the great war of the Mahábhárat.

(No sooner) thou heard'st the cry of the woman's distress.
Súr'dás (exclaims), "O Lord, thou hast saved many a sinner,
Why then dost thou delay in saving me (*lit.* how much delay is there in my time *or* case?" G. A. G.)

॥ ३५ ॥ भजन काफी।

हमारे प्रभु अवगुन चित न धरो
समदरसी तू नाम तेहारो।
चाहो तो पार करो ॥
एक नदिया एक नार कहावत।
मैलो नीर भरो ॥
जब मिलिहे तब एक बर्ण होए।
सुरसर नाम पड़ो ॥
एक लोहा पूजा मों राखत।
एक घर बधिक करो ॥
सो दोविधा पारस नहि राखत।
कञ्चन करत खरो ॥
माया ब्रह्म एक कहलावत।
सूर स्याम झगरो ॥
कि मेरो निसतार करो।
प्रभु नहिँ पन जात टरो ॥

Translation.

Do not, O Lord, take my sins into consideration;
For thou art called the impartial.
Thou canst save at thy will.
One is called a river, the other (is called) a drain
And is full of dirty water; but when they join, they become of one colour,
And the name of Sur'sar (Ganges) they bear.
One piece of iron is used in worship,
Whereas another piece is used as a weapon of destruction;
But the philosopher's stone (Paras) makes no distinction between the two,
It turns both into pure gold.

Máyá and Brahm are called the same,
(But) Súr and Syám (needlessly) dispute about it.
That thou wilt save me,
—oh Lord, do not fail (to fulfil) that promise.

॥ ३६ ॥ सोहनी ।

जाय के जसोदा से कहौंगी रे
सूधे रहो न छुओ कर सौं कर ।
बहुत भई अब नाहि सहौंगी रे ॥
जो तुम हार को हाथ चलाओ, तो ।
लाल मैहूँ बनमाल गहौंगी रे ॥
बरजो रहि, बरजो नहि मानत ।
गाली दिए बिन नाही रहौंगी रे ॥
जाय के जसोदा इत्यादि

Translation.

I will go and report it to Jasodá ;
Be good and don't touch my hand with yours ;
Enough has been done, I will not endure any more.
If you put your hand on my *hár* (golden garland),
O beloved, I too shall take hold of your *ban'mál* (flower garland).
I am prohibiting him, but he will not heed my prohibition.
I shall not cease abusing you.
I will go to Jasodá, etc.

॥ ३७ ॥ सोहनी ।

काँध दे गयो गारी गोंइयाँ कवने नाते ?
ले कर चीर कदम चढ़ि बैठे
हम जल माँह उघारी
काँध दे गयो इत्यादि

Translation.

O friend, Kándh has gone away chaffing me (I do not know) by what (right of) relationship ;*
He has taken away my clothes and climbed on the kadam tree ;

* [This appears to allude to the custom, that only certain relations are allowed to chaff ; thus, a younger brother can laugh with, and chaff, his elder brother's wife.—Ed.]

I am naked in the water.
Kándh has gone away, etc.

॥ ३८ ॥ परच।

अँखिया फरकन लागी रे मोरी
क्या ऊए यार ? किधर गई सखियाँ ?
अँखियाँ इत्यादि
देह फुकतु है जिया तड़पतु है
प्रीत लागाए मजा उन चखियाँ
अँखियाँ इत्यादि
नैनन में दिलदार बसतु है
इन अँखिया अलमस्त परखियाँ
अँखियाँ इत्यादि
बलि बलि जाउँ मैं ओसताद के,
बीच सभा में मोरी पति रखियाँ
अँखियाँ इत्यादि

Translation.

My eyelids are trembling.
What has become of my love, where have my friends gone ?
My eyelids, etc.
My body is inflamed and my heart is beating ;
He has made love to me and taken his fill.*
My eyelids, etc.
My lover lives constantly in my eyes.
These eyes of mine are sure tests of my love.
My eyelids, etc.
I entirely resign myself to God,†
May he preserve my honour in the assembly. ‡

* [Majá is the Persian mazá مزا, which is properly masc., though it is here repeated as fem. ; the phrase literally means : he has sipped the taste ; it is idiomatic for 'he has satisfied himself.'—Ed.]

† [Lit. 'I become a sacrifice to my teacher.'—Ed.]

‡ [*I. e.*, among the people. The line alludes to the story of Draupadí ; see footnote on p. 251.—Ed.]

॥ ३९ ॥ परच ।

१ पऊँचा दे हम को कोइ उन तक ।
निकस जात मोरे जिया की कसक ॥
उची अटाड़ी चढ़ि देख घटा ।
बिजुली रहि जात चमक चमक ॥
तन थरथरात पग डगमगात ।
सखी जियरा होत मोरा धकधक ॥
पऊँचा दे इत्यादि

२ सुधर कँधाई निठुराइ चतुराई ।
मोहि जान पड़ी तोरी तनिक तनिक ॥
काऊ सङ्ग निस दिन चैन करत ।
काऊ तरसाए देखला के झलक ॥
पऊँचा दे इत्यादि

Translation.

1, Let somebody take me to him; the desire (*lit.* the pain) of my heart will then be satisfied.
Getting upon the roof of a high house I see the cloud; the lightning again and again shines and disappears.
My body is shaking and my feet trembling; my heart, O friend, is beating high.
Let somebody take me to him, etc.

2, O fine Kándhá, I have known only a little of thy cunning and cruelty,
With some thou passest day and night, while thou tantalisest others by only exhibiting thy brilliance.
Let somebody take me to him, etc.

॥ ४० ॥ होली गीत ।

कवन जात ब्रज में दधि बेचन
रङ्ग डारी चूनर सारी रे
एक हाथे काँधा मेरो अँचरा जो पकड़े
दूजे हाथ मोरे सारी रे
आन पड़ी बस तेरे रे मोहन
नित उठि दीनो गाली रे

Translation.

Who will go to Brij to sell curds,
(Seeing that) He (Krish'n) will sprinkle coloured water over one's *chúnar* and *sárí?*
For (on a previous occasion) Kándhá (Krish'n) caught hold of the skirts of my cloth with one hand,
And with the other my *sárí;*
Then I said, O Mohan, I have fallen into thy power;
But every morning since then I curse him.

॥ ४१ ॥ होली।

१ पिचुकारी से मुरारी रङ्ग डारी रे
भर पिचुकारी मेरे मुख पर मारी
भीज गई तन सारी रे
२ भीज गए मेरो घेर घाघरा
सारी लाख हजारी रे
पिचुकारी से इत्यादि

Translation.

1, The Murári (Krish'n) has sprinkled coloured water with his syringe,
A whole syringe full he has thrown on my face.
My entire body has become wet.
2, My entire gown (*ghágrá*) has also become wet,
And my *sárí* (wearing cloth) worth a thousand lacs.
With a syringe, etc.

॥ ४२ ॥ खम्माच ठुमरी।

आओ बालम राज, कैसी करू नही पड़त चैन
आओ बालम राज
तलफ तलफ दिन बितत मैं का
चाँद पिया बिन नीद न आवेक
चिङ्क उठी जिय मति तरसा
आओ बालम राज

Translation.

Come, O Bálam Ráj, whatever I may do, I cannot get peace;
Come, O Bálam Ráj.
My days pass in anguish,
And at night without my beloved no sleep comes to me.
My heart starts in pain; do not tantalise me.
Come O Bálám Ráj.

॥ ४३ ॥ खम्माच ठुमरी ।

प्रीतम प्रीत लगाई सुरत मोरी काहँ बिसराई राम
तुमारे इस्क में प्यारे उठाया हम ने गम सारी
फिरौं मैं बन बन मन मारे मौला बिरह से कर न्यारे
प्रीतम प्रीत इत्यादि

Translation.

O beloved, having made love to me, why hast thou forgotten (to pay) attention to me.
In my love of thee, O beloved, I have endured all (manner of) pains;
Broken-hearted I wander about in the forests; O God, relieve me from (this pain of) separation.
O beloved, etc.

॥ ४४ ॥ खेमटा काफी में ।

केत समुझाव जिया मानत नाहीं
मानत नाहीं जिया मानत नाहीं
नई नई प्रीत सुलतान पिया की
बालो भोलो कुछ जानत नाहीं

Translation.

However long you may remonstrate (with me), my mind will not listen,
Oh, it will not listen, my mind will not listen.
My love to my beloved lord (*lit.* Sultán) is ever coming anew,
But being a simple-minded girl, I know nothing (of what will be the consequence).

॥ ४५ ॥ खेमटा काफी में ।

साँवली सूरत मो से भूलत नाहीं
भूलत नाहीं जिया डोलत नाहीं
हटो सखी मोहि जिन समुझाओ
लागि लगन अब छूटत नाहीं

Translation.

I cannot forget the beautiful face (of my love);
Oh I cannot forget, it cannot be removed from my mind.
Away, friend, do not remonstrate with me;
The attachment once formed cannot be broken asunder.

॥ ४६ ॥ पीलू ठुमरी ।

मैं तो अलबेली रे
हमारा कोई क्या करे
अपने सइयाँ की मैं बड़ी रे दुलारी रे
घर में हमी अकेली
हमारा कोइ क्या करे

Translation.

I am young and lovely; what (more) can any one do (for me)?
I am the greatly beloved of my husband;
I am his single wife in the house.
What (more) can any one do (for me)?

॥ ४७ ॥ पीलू ठुमरी ।

छैला गाली न दे रे सुनेंगे सब लोगवा
आर पास के लोगवा सुनेंगे रे
सास सुनेगी जियरा मारी रे
सुनेंगे सब लोगवा

Translation.

Boy, don't joke with me, all people will hear;
Yes, all my neighbours will hear.
If my mother-in-law hears, she will kill me.
All people will hear.

॥ ४८ ॥ दोहरा ।

बेस्या, बारन, अगिन, जल, कूटी, कटक, कलाल ।
— ई दसो नहि आपना —— सुगा, सुई, सोनार ॥

Translation.

Prostitute, monkey, fire, water, hermit, weapon and wine-merchant as well as parrot, needle and goldsmith—these ten are never one's friend.

॥ ४९ ॥ दोहरा ।

चम्पा तुझ में तीन गुण रङ्ग रूप और बास
एगुना तुझ में एक है कि भौर न बैठत पास

(उत्तर) भौरा रसिया फूल का कली कली रस
हरजाई के मित्र को पास न बैठन दे .

Translation.

O Champá (flower) thou hast three properties in thee:
Colour, beauty and fragrance,
(But) thou hast one defect, that the black-bee does not come near thee.

Reply. The black-bee is the lover of flowers and it tastes the sweets of numerous flowers.
I do not allow the friend of prostitutes to come near me.

Notes from Varáha Mihira's Pañchasiddhántiká.—

By G. Thibaut, Phil. Dr.

PART I.

The mean motions of the planets according to the Sú'rya and Romaka Siddha'ntas.

We are at present fairly well-acquainted with the general character of Hindú Astronomy and—among European scholars at least—there prevails no longer any doubt that the system exhibited in works like the Súrya Siddhánta, the Laghu-Áryabhaṭíya, etc. is an adaptation of Greek science. The time to which books like the Súrya Siddhánta must be ascribed from internal data, the date of Áryabhaṭa,—if not *the* oldest, at least one of the oldest of the scientific Hindú Astronomers—which we know from his own statement, the fundamental similarity of the methods employed by the Greeks on the one and the Hindús on the other side, the fact of terms of unquestionably Greek origin being met with in Indian astronomical works, and lastly the testimony which the Hindú writers themselves bear to the proficiency of the Yavanas in the Jyotisha S'ástra more than suffice to convince impartial judges that the enormous progress which a book of the class of the Súrya Siddhánta marks on works of the nature of the Jyotisha Vedánga was not effected without help coming from the West.

But although the general fact of transmission is acknowledged the details of the process still stand in need of much elucidation, and we shall not be able to claim a full understanding of the position of the

Hindú system before we have succeeded in tracing the single steps of the gradual transformation by which it arose from its Greek prototype, and in assigning the reasons of the many important points of divergence of the two. Whether this task will ever be accomplished completely is doubtful. The chief obstacles in the way of success are the loss of several of the most important early Siddhántas which, as their names indicate, were specially connected with Western science, and the uncertainty whether the form in which the preserved Siddhántas have come down to us is the original one or has, in the course of time, undergone alterations. All we can do is to study with the greatest possible care those astronomical books which may to a certain extent make up for the mentioned loss, and enable us to gain some insight into the genesis and original condition of what we may call—in order to distinguish it from earlier and greatly inferior attempts—Scientific Hindú Astronomy.

Among the works belonging to that class by far the most important is the so-called Pañchasiddhántiká by Varáha Mihira. References to this treatise which—as its name implies—is founded on five Siddhántas, were occasionally made by European scholars from the first time when Hindú Astronomy began to attract attention. Manuscripts of the work itself indeed were not forthcoming for a long time, and the important quotations made from it by Colebrooke and subsequent writers, among whom Professor Kern is to be mentioned in the first place, were taken from later astronomical books, chiefly from the Commentary on Varáha Mihira's Bṛihat-Samhitá by Bhaṭṭotpala who in many places endeavours to render his explanations of the latter work more lucid by extracting corresponding passages from the Pañchasiddhántiká. These quotations were, however, amply sufficient to show the extraordinary importance which the treatise in question possesses for the history of Indian astronomy, and it was therefore most welcome news to all students of Sanskrit when Dr. Bühler, whose sagacity and activity in tracing and rescuing from destruction really valuable Sanskrit books stand in no need of further praise, was able to announce in 1874 the discovery of a complete manuscript of the Pañchasiddhántiká. A second somewhat more correct manuscript of the work was later on discovered by the same scholar. Both manuscripts were purchased for the Bombay Government.

Nothing could now be more desirable than an early edition and translation of the entire Pañchasiddhántiká; but unfortunately there are considerable obstacles in the way of a speedy realization of such a wish. In the first place, the two available manuscripts are exceedingly, in more than one case, hopelessly incorrect. In the second place, the text, even if presented in a correct and trustworthy shape, offers to the interpreter unusually great difficulties whose special nature will be set

into a clearer light by a short consideration of the class of books to which the Pañchasiddhántiká belongs.

The Pañchasiddhántiká is a so-called karaṇagrantha. The only definition of the term "karaṇa" by a European scholar of which I know is the one given by Professor Kern, who says (preface to the Bṛihat Saṃhitá, p. 24) that a karaṇa differs from a Siddhánta in this respect, that while in the latter the calculations refer to the beginning of the Yuga, in the former they refer to the Śaka era. This statement is quite correct, but not full enough to give an adequate idea of the nature of a karaṇa. A karaṇa may be defined as a practical treatise on astronomy, *i. e.*, a treatise which enables the astronomer to execute the common astronomical calculations known to the Hindús with the greatest possible ease and despatch. While a Siddhánta explains the general principles of the Hindú astronomical system, and thereby enables the attentive student to construct for himself the rules which are to guide his calculations, a karaṇagrantha exhibits those rules ready made and reduced to the most practical and succinct shape without, however, explaining the theory on which they are based. A karaṇagrantha is thus sufficient for all practical purposes, but not really intelligible without the study of the Siddhánta from which its rules are derived. That it takes for the starting-point of its calculations not the beginning of the Yuga or kalpa but that of the Śaka era is of course merely a consequence of the desire to render all calculations as easy and short as possible. The most important books of the karaṇa class are the Grahalághava by Gaṇeśa Daivajña, the Bhásvatí by Śatánanda, the Karaṇakutúhala by Bháskara and, among more ancient works, the Khaṇḍakhádyaka by Brahmagupta and, holding the first rank in importance, the Pañchasiddhántiká.

This latter work has, however, a wider scope than an ordinary karaṇagrantha. It does not form the practical complement of one Siddhánta only, as for instance the karaṇakutúhala does with regard to the Siddhánta Śiromaṇi, but as its name indicates, it gives rules in accordance with five different Siddhántas. These Siddhántas are, as we now may see from the introductory verses of the Pañchasiddhántiká itself, while formerly our information regarding them was derived from the Bṛihat Saṃhitá and its commentary, the Saura, Pauliśa, Romaka, Vásishṭha and Bráhma or Paitámaha Siddhántas. Of these five Siddhántas only the Saura or Súrya Siddhánta is known to exist at present. The Pauliśa, Romaka, Paitámaha Siddhántas appear to be lost; I am doubtful whether the Vásishṭha Siddhánta to which Varáha Mihira refers has come down to our time or not. We are thus on the whole not in a position to elucidate the highly condensed and often altogether enigmatical rules of the Pañchasiddhántiká by referring to the Siddhántas on

which they are founded, but must explain them by themselves as well as we can, availing ourselves of the fragmentary collateral information which may be derived from other sources, and must finally attempt to reconstrue from the karaṇa rules the leading features of the Siddhántas on which they were founded. The latter part of the task is of course the most important, but at the same time the most difficult one, and we shall for the present succeed in it only very partially. Were it not that Varáha Mihira has allowed himself in many points to be more circumstantial than ordinary karaṇa-writers are, so that the Pañchasiddhántiká may in fact be said to occupy a kind of intermediate position between a karaṇa and a Siddhánta, the task would be an altogether hopeless one. As it is, it remains difficult enough and only the manifest importance of the book can maintain the zeal of the student whose efforts at unravelling the sense of the obscure stanzas are foiled more than once. There are of course a considerable number of passages which are by no means difficult to understand, some entire chapters even fall under that category; but then those chapters and passages are easy because they contain no matter new to us and merely restate what we already know from other sources. The chapters which add to our store of knowledge are throughout difficult, some of them so much so that there is no chance of their being fully understood until better manuscripts of the Pañchasiddhántiká are found. Other passages again, although difficult, may be explained satisfactorily. Some of this latter class, *viz.*, those treating of the mean motions of the planets according to two Siddhántas will form the subject of this paper.* A few introductory remarks on the contents of the entire work and the consideration of a few specially interesting passages will be premised before we enter on our special task.

The Pañchasiddhántiká appears to be divided into eighteen adhyáyas, although the exact number may be a matter of some doubt, as in the manuscripts the endings of the chapters are not very clearly marked, and

* I may mention here that I am engaged, with the assistance of Pandit Sudhákara one of the foremost Jyotishis of Benares, in preparing an edition and translation of the entire Pañchasiddhántiká as far as the deficiencies of the manuscripts etc. will allow. But as it is uncertain when this task will be accomplished, I think it advisable to publish in the interim some of the more interesting results. I avail myself of this opportunity to acknowledge the very valuable assistance I have received from Pandit Sudhákara in preparing the present paper. He has verified many of my calculations and in some points tendered original suggestions which were most useful. I specially mention his advice to calculate the kshepa quantities of the Súrya Siddhánta from the beginning of the Kalpa, an advice the carrying out of which led to most satisfactory results.

the numbering of the stanzas is carried on through several adhyáyas. The first adhyáya, called karaṇávatára, contains some introductory verses, a rule for the calculation of the ahargaṇa, statements regarding the different yugas used in the Pauliśa, Romaka, Súrya Siddhántas, and some rules regarding the calculation of the regents of the years, months, etc. The second very short adhyáya is called at its end nakshatrádichheda and apparently contains rules about the mean places of the moon, length of day and night, shadow, etc. The third adhyáya is marked at the end "Pauliśa Siddhánta" and contains the most important rules for the calculation of the mean place of the sun, the true places of sun and moon, the moon's node, latitude, terrestrial longitude, ayana, etc. The fourth adhyáya, marked merely as "karaṇádhyáyaś chaturthaḥ" contains the table of sines and matter corresponding to that of the third adhyáya of the Súrya Siddhanta. The very short fifth adhyáya is entitled S'aśidarśaṇam. The sixth adhyáya contains chandragrahaṇam, *i. e.*, the rules for calculating lunar eclipses according to the Pauliśa Siddhánta, the matter of all the preceding chapters having been merely preliminary to the calculation of eclipses. The seventh adhyáya treats of solar eclipses "Pauliśa siddhánte ravigrahaṇam." The eighth chapter treats of the calculation of solar eclipses according to the Romaka Siddhánta and contains at the same time all the general information about the Romaka Siddhánta which the Pañchasiddhántiká affords. The ninth adhyáya has for its subject the calculation of solar eclipses according to the Súrya Siddhánta with preliminary statements about the mean motions, etc. of sun and moon. The tenth adhyáya treats of lunar eclipses according to the same Siddhánta. The eleventh adhyáya called at its close "avarṇanátyekádaśo 'dhyáyaḥ" contains additional matter about eclipses. The twelfth very short adhyáya "paitámahasiddhánte dvádaśo-'dhyáyaḥ" is the only chapter which treats of the Paitámaha or Bráhma Siddhánta. The thirteenth adhyáya "trailokyasamsthánam" contains information akin to that which is found in the twelfth chapter of the Súrya Siddhánta. The fourteenth adhyáya "chhedyakayantráṇi" gives information about astronomical instruments, etc. The fifteenth adhyáya "jyotishopanishad" states the differences produced in eclipses of the sun by difference of locality; the different opinions about the beginning of the day, etc. The sixteenth adhyáya "súryasiddhánte madhyagatiḥ" states the mean motions of the planets according to the Súrya Siddhánta. The seventeenth adhyáya "tárágrahasphuṭikaraṇam" gives the rules for calculating the true places of the planets. The last adhyáya "Pauliśasiddhánte tárágrahāḥ" contains rules about the heliacal rising and sitting etc. of the planets, apparently according to the Pauliśa Siddhánta.

The introductory verses in which Varáha Mihira states the purport of the entire Pañchasiddhántiká run as follows :—

दिनकरवसिष्ठपूर्वान् विविधमुनीन्द्रान् प्रणम्य भक्त्यादौ ।
जनकं गुरुं च शास्त्रे येनास्मिन्नः कृतो बोधः ॥
पूर्वाचार्यमतेभ्यो यच्छेषलघुस्फुटं बीजम् ।
तत्तदिहाविकलमहं* रहस्यमभ्युद्यतो वक्तुम् ॥
पौलिशरोमकवासिष्ठसौरपैतामहास्तु पञ्च सिद्धान्ताः ।
पञ्चभ्यो द्वावाद्यौ व्याख्यातौ लाटदेवेन ॥
पौलिशतिथिः† स्फुटो ऽसौ तस्यासन्नस्तु रोमकप्रोक्तः‡ ।
स्पष्टतरः सावित्रः परिशेषौ दूरविभ्रष्टौ ॥
यत्तत्परं रहस्यं भ्रमति मतिर्यच्च तन्त्रकाराणाम् ।
तदहमपहाय मत्सरमस्मिन्कृत्स्ने ग्रहं भानोः ॥
दिक्क्षितिविमर्दकर्णप्रमाणवेला ग्रहाग्रहाविन्दोः ।
ताराग्रहसंयोगं देशान्तरसाधनं§ चास्मिन् ॥
सममण्डलचन्द्रोदययन्त्रच्छेद्यानि शङ्कुवच्छाया‖ ।
उपकरणाद्यन्त्यावलम्बकापक्रमाद्यानि ॥

These verses are followed by the rule concerning the calculation of the ahargaṇa which will be considered later on. In the last chapter the author names himself as Varáha Mihira of Avanti.

I further extract a statement found in the 3rd chapter which is of considerable interest as containing a very clear indication of the dependence of Hindú astronomy on Greek science. We read there :

यवनानान्नरजा नाड्यः सप्तावन्त्यां¶ त्रिभागसंयुक्ताः ।
वारणस्यां त्रिकृतिः साधनमन्यत्र वक्ष्यामि ॥

"The nádís arising from the difference in longitude from Yavana, (*i. e.*, Yavanapura) are seven and a third in Avanti, nine in Benares; the method of ascertaining them I will state elsewhere."

The verse contains a statement of the difference in longitude between Ujjain and Benares on the one side and Yavanapura on the other side. That by the latter name (which occurs in another place of the Pañchasiddhántiká also) we have to understand Alexandria has been remarked by Professor Kern already; the passage we are considering at present

* A. तक्कादिहाविलम॰ B. तत्तदिहाखिलम॰

† A. ॰तिथिस्फु॰ B. ॰तिथः स्फु॰

‡ A. ॰मकः

§ A. ॰सावनं

‖ ? A. ॰छेप्रानिता (ड added in margin) वच्छाया B. छेद्यानिताण्डवच्छाया.

¶ Both MSS. ॰वन्त्याखिभा॰

furnishes the proof. The real eastern longitude (from Greenwich) of Ujjain is 75° 51′ 45″, that of Benares 83° 3′ 4″, that of Alexandria 29° 52′; therefore, the seconds being neglected, Ujjain is in 46° E. Long. Benares in 53° 11′ E. Long. from Alexandria. If we now, on the other hand, calculate the difference in longitude of the mentioned three places from the difference in time stated by Varáha Mihira we obtain 44° as the longitude of Ujjain from Alexandria and 54° as the longitude of Benares from the same place. The error involved in Varáha Mihira's determination is not inconsiderable, but not greater than might have been expected, certainly not too great for our assuming with confidence that Yavanapura is to be identified with Alexandria.* As a transfer of Hellenic astronomy to India could not have taken place without some determination of the interval in longitude we might assume such a determination to have been made even if no trace of it had been preserved in India; still it is satisfactory to find the determination explicitly stated in the book which professes to give an account of the fundamental Siddhántas.

Before leaving this subject we must refer to another passage of the Pañchasiddhántiká which is quoted by Bhaṭṭotpala, and which has been supposed to contain likewise a statement about the difference in longitude between Ujjain and Alexandria. It occurs in the 15th adhyáya and need not be reprinted here in full as it has already been published by Professor Kern in his paper on some fragments of Áryabhaṭa, Journal of the Royal Asiatic Society, Vol. XX, 1863 and again in the Preface to his edition of the Bṛihat Saṃhitá, p. 53. The two lines immediately concerning us here are given by Professor Kern, as follows:

रव्युदये लङ्कायां सिंहाचार्येण दिनगणोऽभिहितः।
यवनानां निशि दशभिर्मुहूर्तैश्च तद्ग्रहणात्॥

and rendered "Sinháchárya states the sum of days (to begin) from sunrise at Laṅká and, if we adopt this, they must begin in the country of the Yavanas at the time that ten muhúrtas of the night are past." From this Professor Kern concludes that in the opinion of Varáha Mihira the meridian of Yavana-pura has a longitude west from the meridian of

* Professor Kern notices the possibility of Yavanapura being not Alexandria but Constantinople, but rejects it on the ground of no first meridian ever having been drawn over the latter place. If we identified Yavanapura with Constantinople we should reduce the above-mentioned error of longitude by one degree; but nevertheless its identification with Alexandria is much more likely if we consider firstly the general importance of Alexandria; secondly, its geographical position with regard to India, and thirdly, its having been the place where the system of Greek astronomy was finally elaborated.

Laṅká, of 60 degrees. (See Preface, p. 54.) This translation of the text as given by Bhaṭṭotpala and the inference he draws from it are indeed quite correct; but we see at once that the passage as it stands cannot be reconciled with the one translated above from which there results a difference of longitude amounting to 44° only. The apparent contradiction is solved when we turn to the text of the Pañchasiddhántiká as exhibited in the two manuscripts available at present. For there the reading at the conclusion of the second line is not तद्गुरुणात् but तद्गुरुणा, so that we have to translate "Siṃhácháryа states the sum of days to begin from sunrise at Laṅká; when ten muhúrtas of the night of the Yavanas are passed (the day is stated to begin) by their guru, (*i. e.*, the guru of the Yavanas who I suppose is no other than the often-quoted astronomical writer Yavaneśvara)." The two lines therefore contain unconnected statements, and do not in any way enable us to draw a conclusion about what Varáha Mihira considered to be the relative longitude of Laṅká (or Ujjain) and Alexandria. In addition I quote a passage from some unknown writer found in the Maríchí (on Siddhánta-Siromaṇi, Gaṇitádhyáya, Madhyamádhikára, deśántara) which being apparently a periphrase of the passage from the Pañchasiddhántiká confirms the text and translation of the latter as given above:

केचिद् वारं सवितुरुदयात् प्राहुरन्ये दिनार्धात्।
भानोरर्धास्तमयसमयादूचिरे केचिदेवम्॥
वाराद्यादिं यवनन्नपतिर्दिङ्मुहूर्तैं निशायां।
लाटाचार्यः कथयति पुनश्चार्धरात्रे स्वतन्त्रे॥

"Some declare the day to begin from sunrise, others from noon; again others from the moment when the sun has half set. The prince of the Yavanas reckons the beginning of the day from (the moment when) ten muhúrtas of the night (are past), Láṭáchárya again in his book from midnight."

Here the "yavananṛipatiḥ" of the third line answers to the yavanaguru of Varáha Mihira and renders the identification of the latter with Yavaneśvara more probable. The statement made in the last line about Láṭáchárya is mistaken as, according to the Pañchasiddhántiká, that writer reckoned the beginning of the day from sunset, while midnight was chosen as starting-point by Áryabhaṭa.

After these preliminaries we now enter on a discussion of those passages of the Pañchasiddhántiká which contain the rules for the calculation of the mean places of the planets according to the Súrya and Romaka Siddhántas. Beginning with the former we at first extract a stanza of the 1st adhyáya which furnishes us with the requisite informa-

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tion about the yuga acknowledged by the Súrya Siddhánta as known to Varáha Mihira.

वर्षायुते धृतिघ्ने नववसुगुणरसरसाः स्युरधिमासाः ।
सावित्रे शरनवखेन्द्रियार्णवाशास्तिथिप्रलयाः ॥

"According to the Súrya Siddhánta there are in 180,000 years 66,389 intercalary months and 1,045,095 omitted lunar days."

Comparing these statements with those to be found on the same point in the hitherto known Súrya Siddhánta, we observe of course at once that the Pañchasiddhántiká, as was to be expected from a karaṇa-grantha, employs reduced numbers. The known Súrya Siddhánta gives the corresponding figures for a maháyuga of 4,320,000 years of which period the 180,000 years of the Pañchasiddhántiká are the twenty-fourth part. We therefore multiply the 66,389 intercalary months by 24 and find that the product 1,593,336 agrees with the figure which the Súrya Siddhánta (I. 38) gives for the intercalary months. We, however, meet with a discrepancy when comparing the two statements regarding the number of the omitted lunar days. The Súrya Siddhánta (I. 38) assumes the number of omitted lunar days in one maháyuga to be 25,082,252, while the number stated above, 1,045,095, multiplied by 24 gives as product 25,082,280, which figure exceeds the former one by 28. If we now proceed to deduce from the above statements about the nature of the yuga of the Súrya Siddhánta as known to Varáha Mihira the length of the sidereal solar year (by calculating according to the known Indian fashion the number of the tithis of the entire yuga, deducting from it the tithikshayas and dividing the remainder by the number of solar years) we obtain as the result $365^d\ 6^h\ 12'\ 36''$; while the length of the year of the known Súrya Siddhánta, in accordance with the smaller number of the omitted lunar days, amounts to a little more, *viz.*, $365^d\ 6^h\ 12'\ 36{\cdot}56''$. The discrepancy is a slight one, but it suffices to show that the Súrya Siddhánta which Varáha Mihira had before himself was different from the one known to us. It might perhaps be objected that the discrepancy is only an apparent one, Varáha Mihira having slightly changed one of the numbers of the Súrya Siddhánta in order to be able to reduce all numbers more considerably and thereby to establish more convenient rules for calculation. That the karaṇa writers are in the habit of proceeding in that manner is well-known, and we shall see later on that Varáha Mihira submits in certain cases the exact numbers to certain alterations. The present case, however, is of a different nature. The passage about the yuga of the Súrya Siddhánta is not an independent rule, in the formulation of which the writer might have allowed himself certain liberties, but a mere statement reproducing

the doctrnes of another work, and as such it would be of no value whatever if it were not strictly accurate. We shall moreover meet later on with several other instances showing that the mere fact of Varáha Mihira's statements not agreeing with the known Súrya Siddhánta is not sufficient to throw a doubt on their accuracy. It is finally to be remarked that the solar year of the Súrya Siddhánta as known to Varáha Mihira is identical with the solar year of that Pauliśa Siddhánta about which Bhaṭṭotpala in his commentary on the Bṛihat Saṃhitá has given us some information (*Cf.* Colebrooke's Essays, II, p. 365).

We next turn to some verses containing rules for the calculation of the mean places of sun and moon according to the Súrya Siddhánta. They are found in the 9th adhyáya :

युगे र्कौ शतगतघ्ने विपक्षवेदार्णवे र्कसिद्धान्ते।
खरखद्विदिनवयमोद्धृते क्रमाद् दिनदले ऽवन्त्याम्* ॥

"The (mean place of the) sun is found, for midday at Avanti, by multiplying the ahargaṇa by 800, deducting 442, and then dividing by 292,207."

This verse contains two elements which are to be considered separately; in the first place a general rule for calculating the mean place of the sun, in the second place a so-called kshepa, *i. e.*, an either additive or subtractive quantity whose introduction into the rule enables us to take for the starting-point of our calculations the epoch of the karaṇa instead of the beginning of the yuga. The general rule is understood without difficulty. It bases on the proportion: if in 65,746,575 sávana days (*i. e.*, the sávana days contained in 180,000 years), there take place 180,000 revolutions of the sun or, both numbers being reduced by 225, if 800 revolutions take place in 292,207 days, how many revolutions will take place in the given ahargaṇa? The result is the mean place of the sun at the end of the given ahargaṇa. We now turn to the kshepa 442. If on the first Chaitra S'aka 427, which date is the starting-point of all calculations of the Pañchasiddhántiká,† the sun had performed an entire number of revolutions without remainder a kshepa would of course not be required. The actual kshepa, 442 on the other hand shows that at the mentioned time $\frac{442}{292207}$ were wanting

* Both manuscripts read in the first line र्कौ, in the second खरखाद्विधिनव°. The second emendation is shown by calculation to be necessary. Both emendations are borne out by the manuscripts of Bhaṭṭotpala who quotes the above verse. A. reads ऽलेवत्यां B. °लेवत्वा.

† See about this point the rule for calculating the ahargaṇa which will be discussed later on in connection with the Romaka Siddhánta.

to a complete revolution or, which comes to the same, that the sun had then performed a number of complete revolutions plus $\frac{291765}{292207}$ of a revolution. Now in order to explain this kshepa we must ascertain according to what principles and starting from which period Varáha Mihira calculated the mean place of the sun on the 1st Chaitra Śaka 427. The principles are doubtless those on which the statement concerning the nature of the yuga and the general rule for calculating the sun's mean places are founded, and we can therefore be in no uncertainty as to the method of forming the ahargaṇa and calculating from it the madhyama Súrya. Less certain is the epoch beginning from which the ahargaṇa is to be formed. If we try the different possibilities we find that neither the beginning of the Kaliyuga nor the end of the Kṛitayuga lead to the above-stated kshepa, that, however, a calculation starting from the beginning of the kalpa gives the desired result, although the course of procedure involves a few small irregularities. I will succinctly state the details of the calculation in order to facilitate its control. The sum of years (the varshagaṇa) from the beginning of the kalpa to the epoch of the karaṇa amounts to 1,955,883,606 (1,953,720,000 to the end of the kṛita, 2,160,000 for Tretá and Dvápara, 3,179 from beginning of Kali to Śaka, 427 from Śaka to epoch of Karaṇa). From the varshagaṇa we deduce in the customary manner (availing ourselves, however, of the elements of the yuga as stated by Varáha Mihira, not of the corresponding elements of the known Súrya Siddhánta) the adhimásas, which we find to amount to $721{,}384{,}203 + \frac{178734}{180000}$. Instead of those we take, svalpántaratvát, 721,384,204 and thus obtain as the number of chándramásas for the entire stated period 24,191,987,476. Multiplying this number by 30 we get the tithis from which we deduce, by means of the statement about the tithikshayas of the yuga, the number of the ishṭa kshayáha. We find $11{,}356{,}023{,}206 + \frac{4941258}{6679167}$. Instead of this we take 11,356,023,207 which deducted from the tithis gives for the ishṭa sávana ahargaṇa 7,14,403,601,073. Multiplying this number by 800, according to the general rule about the mean places of the sun, and dividing by 292,207 we find that the sun has performed, from the beginning of the kalpa down to the epoch of the Pañchasiddhántiká, $1{,}955{,}883{,}606 - \frac{42}{292207}$ revolutions. The required kshepa is $-\frac{442}{292207}$. But now we have to remember that the ahargaṇa of the Súrya Siddhánta gives the mean places of the planets at midnight at

Lañka while the rule of Varáha Mihira is, as we have seen, meant to give their mean places at noon. We therefore have to deduct from the mean place of the sun as found hitherto his mean motion for half a day, in order to obtain his mean place on the preceding noon. This mean motion for a day is $\frac{800}{292207}$, half of which is $\frac{400}{292207}$. Combining this subtractive quantity with the one found above $\left(-\frac{42}{292207}\right)$ we get $-\frac{442}{292207}$, the exact quantity stated in Varáha Mihira's rule. The result has therefore justified the small assumptions made in the calculation of the ahargaṇa; the latter will moreover receive additional confirmation from the rules about the mean places of the moon and the planets which will be discussed later on.

The period of 800 years comprising 292,207 sávana days whereby to calculate the mean place of the sun is of frequent occurrence in Indian astronomical writings and tables. It is employed by Brahmagupta in the Khaṇḍa-khádya. It is found in the Siamese astronomical rules which became known in Europe as early as 1688 and were first interpreted by Cassini. It is likewise used in the astronomical tables sent to France by the Père Patouillet and explained by Bailly in his Traité de l'Astronomie Indienne et Orientale, (p. 54; Discours préliminaire, p. xi).

The verse which in the Pañchasiddhántiká follows next on the one explained above runs as follows:

नवशतसहस्रगुणिते खरैकपक्षाम्बरस्वरर्तुघ्ने ।
षड्घ्नेन्द्रियनववसुविषयजिनैर्भाजिते चन्द्रः ॥

(In the first line we have to read °स्वरर्तुघ्ने; in the second line, as will appear from the calculation, षड्घ्नेन्द्रिय°; B. reads षड्घ्नेनेंद्रिय°.)

"Multiply (the ahargaṇa) by 900,000, deduct 670,217 and divide by 24,589,506; the result is the mean place of the moon." The general rule about the mean places of the moon which is contained in this verse is easily explained from the statements on the yuga of the Súrya Siddhánta which we have had occasion to consider. The yuga comprises 180,000 years. Multiplying these by 12 and adding the intercalary months we have 2,226,389 lunar synodical months. Again adding to these the 180,000 revolutions of the sun we get 2,406,389 as the number of the sidereal revolutions of the moon which take place in one yuga. (Dividing by the last number the sávana days of the yuga we find as the length of the sidereal month $27^d\ 7^h\ 43'\ 12{\cdot}60''$. The length of the sidereal month of the known Súrya Siddhánta amounts to $27^d\ 7^h\ 43'\ 12{\cdot}64''$). From the fact of 2,406,389 sidereal revolutions of the moon

being contained in 65,746,575 days the mean place of the moon for any given ahargaṇa might of course be deduced directly; smaller numbers were, however, desirable as facilitating the calculations, and Varáha Mihira therefore substituted the relation of 900,000 revolutions to 24,589,506 days which offers the advantage of a smaller divisor, and a not only smaller but also much simpler multiplicator. The substitution involves indeed a slight inaccuracy since 900,000 revolutions of the moon take place in $24,589,506 + \frac{746166}{2406389}$ days, the fractional part of which quantity is neglected in the general rule. The error which results therefrom is, although insignificant, not to remain uncorrected and Varáha Mihira adds therefore (after one intervening verse about the mean place of the moon's uchcha) the following rule:

शशिविषयघ्नानीन्दोः खार्काग्निहृतानि मण्डलानि क्षेप्यम्।
खोघे दिग्घ्नानि धनं खरदखयमोद्धृते विकलाः॥

"Multiply the (elapsed) revolutions of the moon by 51 and divide by 3,120; the (resulting) seconds are to be deducted (from the mean place of the moon as found by the general rule)." (The second part of the rule refers to the moon's uchcha). The correction stated here is easily accounted for. By a proportional calculation we find that the moon performs in $\frac{746166}{2406389}$ of a day about 14,708 seconds of a circle. To so much consequently the error resulting from the neglect of the fraction amounts for 900,000 revolutions. The error for one revolution is therefore equal to $\frac{14708}{900000}$ seconds or, as Varáha Mihira prefers to express it, reducing both numbers by 288, to (about) $\frac{51}{3120}$ seconds. The explanation of the kshepa, 670,217 is not quite so simple as that of the solar kshepa. We of course again employ the kalpády-ahargaṇa which had led to a satisfactory result in the case of the sun's mean place. If we, however, proceed according to the general rule given by Varáha Mihira, multiplying that ahargaṇa by 900,000 and dividing by 24,589,506 and finally applying the prescribed correction, we find that the remainder combined with the moon's mean motion for half a day does not equal the stated kshepa. The fact is that approximately correct rules and approximately accurate corrections are applicable to comparatively short periods, but become altogether misleading if periods of very considerable length as for instance the kalpády-ahargaṇa are concerned. In such cases we must discontinue the use of reduced factors and employ absolutely correct numbers. In the present instance we consequently have to employ the

number of lunar months and sávana days of the entire yuga. We multiply the kalpády-ahargaṇa as formed above by 2,406,389 (= the number of the sidereal revolutions of the moon in a yuga), divide by 65,746,575 (= number of sávana days), reject the quotient which expresses the complete revolutions and keep the remainder 65,157,822 which indicates that at the time of the epoch the moon had, in addition to the complete revolutions, performed $\frac{65157822}{65746575}$ of a revolution or, which is the same, that $\frac{588753}{65746575}$ were wanting to a complete revolution. This fraction, in order to be capable of being introduced into the general rule must be turned into 24,589,506^{ths}; which being done we obtain $\frac{220197}{24589506}$. To this quantity again we have to add half the amount of the moon's daily mean motion $= \frac{450000}{24589506}$ in order to find the mean place of the moon at noon instead of the following midnight. The addition of the two subtractive quantities gives — 670,197, which quantity differs by 20 only from the kshepa stated in Varáha Mihira's rule: the discrepancy to whatever reasons it may be owing is much too small to be taken into account; the difference in the mean place of the moon at the time of the epoch which results from it amounts to 1″ 3‴ only.

The rule following next on the one referring to the mean motion of the moon teaches how to find the mean place of the moon's uchcha. A few unimportant emendations being made, it runs as follows:

नवशतगुणिते दस्राद्रसविषयगुणाम्बरर्तुयमपचान्।
नववसुसप्ताष्टाम्बरनवाब्धिभक्ते शशाङ्कोच्चम् ॥

"Add 2,260,356 to (the ahargaṇa) multiplied by 900 and divide by 2,908,789; the result is the mean place of the uchcha of the moon."

From the general rule involved in the above viz. that 900 revolutions of the moon's uchcha take place in 2,908,789 days, it follows that one revolution occupies 3,231^{d} 23^{h} 42′ 16·76″. Comparing this period with the duration of the revolution according to the known Súrya Siddhánta which amounts to 3,232^{d} 2^{h} 14′ 53·4″ we feel at once inclined to suspect that the difference of the two quantities which is rather considerable is not merely owing to Varáha Mihira's desire of establishing a rule offering facilities for practical calculations but results from a real discrepancy of the two Súrya Siddhántas. And a closer consideration of the point confirms this suspicion. According to the known Súrya Siddhánta the chandrochcha of the moon performs 488,203 resolutions in one maháyuga If we now, in order to ascertain the corresponding number of the

Súrya Siddhánta known to Varáha Mihira, multiply the 1,577,917,800 days of the maháyuga by 900 and divide by 2,908,789 we get as quotient nearly 488,219. Varáha Mihira's Súrya Siddhánta therefore reckoned so many revolutions of the uchcha to one maháyuga and it is of interest to remark that it therein exactly agreed with the doctrine of Áryabhaṭa (see the Áryabhaṭíya edited by Kern, p. 6). We finally test the exactness of our assumption by the calculation of the kshepa stated in Varáha Mihira's rule. Multiplying the kalpády-ahargaṇa as ascertained before by 488,219 and dividing the product by 1,577,917,800 (the number of the days of a yuga) we get as remainder $\frac{1226408787}{1577917800}$. Converting the quantity which expresses the fraction of the revolution incomplete at the epoch of the karaṇa into 2,908,789ths in order to render it capable of being introduced into the general rule, we obtain for the numerator 2260805 (and a small fraction). From this positive kshepa we finally deduct 450 = half the daily motion of the uchcha in order to carry back the mean place to the preceding noon; the remainder 2,260,357 differs by one only from the kshepa stated in the rule. It thus appears that the number we had assumed for the revolutions of the uchcha according to Varáha Mihira's Súrya Siddhánta is the right one. Varáha Mihira finally applies a correction which becomes necessary in consequence of reduced and slightly inaccurate figures having been employed in the general rule. The amount of this correction is stated in the second half of the verse quoted above शशिविषयघ्नानीन्दोः etc., I am, however, unable for the present to account for it by calculation. The fault possibly lies with the corruption of the manuscripts.

The same chapter contains a rule for calculating the mean places of the moon's node; which I am, however, unable to explain. We therefore turn now to the 16th adhyáya which treats of the mean places of the so-called tárá-grahas. The text of this short adhyáya runs as follows:

एष निशार्धऽवन्त्यां ताराग्रहनिर्णयोऽकसिद्धान्ते। *
तत्रेन्दुपुत्रशुक्रौ तुल्यगतौ मध्यमार्केण। †
जीवस्य शताभ्यस्तं द्वित्रियमाग्नित्रिसागरैर्विभजेत्। ‡
द्युगणं कुजस्य चन्द्राहतं तु सप्ताष्टपद्भक्तम्। §
सौरस्य सहस्रगुणादृतुरसशून्यर्तुषट्कमुनिखैकैः। ||

* A. B. ०वत्यां A. निर्णोर्केसि० B. ०ग्रहणकसि०

† A. महमा० B. ०मार्केसा.

‡ B. निवस्य.

§ A. सप्ताष्टद्भक्तं.

|| B. सौम्यस्य A. गुणादनुरससू०

यल्लब्धं तेभगणाः शेषा मध्यग्रहाः क्रमेणैव । *
दश दश भगणे भगणे संशोध्यास्तत्पराः सुरेज्यस्य । †
मनवः कुजस्य देयाः शनेश्च बाणा विशोध्यास्तु । ‡
राशिचतुष्टयमंशद्वयं कलाविंशतिर्वसुसमेताः । §
नववेदाश्च विलिप्ताः शनेर्धने मध्यमास्त्वेव (?) ।
अष्टौ भागा लिप्तर्तवः खमक्षौ गुरौ विलिप्ताश्च । ¶
क्षेपः कुजस्य यमतिथिपञ्चत्रिंशच्च राश्याद्याः । **
शतगुणिते बुधशीघ्रं स्वरनवसप्ताष्टभाजिते क्रमशः । ††
अत्रार्धपञ्चमास्तत्पराश्च भगणाहताः क्षेपः । ‡‡
शितशीघ्रं दशगुणिते द्युगणे भक्ते स्वरार्णवाश्चियमैः । §§
अर्धैकादश देया विलिप्ता भगणसंगुणिताः । ||||
सिंहस्य वसुयमांशाः स्वरेन्दवो लिप्तिका ज्ञशीघ्रधनम् । ¶¶
शोध्याः सितस्य विकलाः शशिरसनवपक्षगुणदहनाः । ***

(The few remaining verses of the adhyáya will be quoted below.)

"1. The determination of the (mean places of the) smaller planets (*i. e.*, the grahas except sun and moon) for midnight at Avanti is as follows:

"2. Mercury and Venus have the same motion with the mean sun.

"3. For Jupiter multiply the ahargaṇa by 100 and divide by 433,232.

"4. For Mars multiply the ahargaṇa by 1 and divide by 687.

"5. For Saturn multiply the ahargaṇa by 1000 and divide by 10,766,066.

"6. The quotients are the entire revolutions, the remainders are the mean places of the planets in their order.

"7. For each revolution of Jupiter 10 tatparas (thirds, *i. e.*, sixtieth parts of a second) are to be deducted.

"8. 14 tatparas are to be added for each revolution of Mars; 5 are to be deducted for each revolution of Saturn.

"9. 10. 4 signs, 2 degrees, 28 minutes and 49 seconds are to be added to the mean place of Saturn.

"11. 8 degrees, 6 minutes and 20 seconds are the additive quantity for Jupiter.

* B. सहस्रगुणा १००० । रुतुरस०
† B. दशांशभगणे.
‡ B. नमवः कुकुक्षु दे० A. ०शोध्यास्तु
§ B. ०शोध्याः स्युः
|| B. नवदेवाश्च लिप्ताः शनेमध्यमस्त्वेयम्.
¶ B. ०र्तवः शेषसौ गुरुवि०
** A. जमति० B. तितिथि० ०शद्य.
†† B. ०णितं.
‡‡ A. ०हतः B. हताक्षिपा.
§§ A. B. द्विगुणे.
|||| A. अर्कैका० B. ०लिप्तिका भ०
¶¶ A. स्वरोदवो B. स्वरेदेवो.
*** A. B. शोसितस्य ०पक्षा० ०गणा०

"12. For Mars the additive quantity are 2 signs, 15 degrees, 35 minutes.

"13. For the Sîghra of Mercury, multiply the ahargaṇa by 100 and divide by 8,797.

"14. There the kshepa amounts to the product of four and a half tatparas into the (accomplished) revolutions.

"15. For the Sîghra of Venus multiply the ahargaṇa by 10 and divide by 2,247.

"16. To be added are ten and a half seconds multiplied by the revolutions.

"17. 28 degrees of Leo (*i. e.*, 4 signs plus 28 degrees) and 17 minutes are the additive quantity of the Sîghra of Budha.

"18. From (the Sîghra of) Venus are to be deducted 332,961 seconds."

Of these sixteen lines, lines 1 to 6 contain rules for the calculation of the mean places of the five planets. Lines 7 and 8 state what corrections have to be applied to the mean places of Jupiter, Mars and Saturn if calculated according to the rules previously laid down. Lines 9 to 12 inform us what quantities are to be added to the mean places calculated and corrected according to the preceding rules, *i. e.*, they state the mean longitudes of the planets at the epoch of the Karaṇa. Lines 13 to 16 contain the rules for calculating and correcting the mean places of the Sîghra of Mercury and Venus.

Let us now enter into details and compare the above statement regarding the planets' periods of revolution with what is known from other sources. Of Jupiter it is stated in line 3 that it performs 100 revolutions in 433,232 days; one revolution therefore occupies 4,332·32 days. This nearly agrees with the doctrine of the published Súrya Siddhánta which counts 364,220 revolutions of Jupiter to 1 mahâyuga of 4,320,000 years, and consequently, the mahâyuga comprising 1,577,917,828 days, 1 revolution to 4,332·3,206,523 days. A small difference between Jupiter's periods of revolution according to the known Súrya Siddhánta and the Súrya Siddhánta of the Pañchasiddhántiká results of course from the repeatedly mentioned fact of the yuga of the latter work comprising 28 days less. We therefore assume at first that the Súrya Siddhánta of the Pañchasiddhántiká also gave 364,220 revolutions to 1 yuga, and therefrom derive the exact period of one revolution $\frac{1577917800}{364200} = 4{,}332{\cdot}3{,}205{,}754$. From this it appears that the general rule given above, according to which 1 revolution comprises 4,332·32 days, is inaccurate and stands in need of a correction. In order to ascertain the amount of the latter we take the difference of the accurate and the approximate periods of revolution = 0·0005754 and there-

from derive by means of a proportion (4,332·3,205,754 : 360 = 0·0005754 : ✕) that fractional part of a circle which Jupiter passes through in the 0·0005754th of a day. The result are 10‴ of a circle. Thereby is explained the rule given in line 7 according to which 10‴ for each revolution have to be deducted from the mean place of Jupiter resulting from line 3. We finally have to explain the kshepa stated in line 11. Multiplying the kalpády-ahargaṇa by 364, 220 and dividing by the days of a maháyuga we find that from the beginning of the kalpa down to the epoch of the book, Jupiter had performed $16490909 + \frac{1776393}{78895890}$ revolutions. The fraction turned into degrees, minutes etc. gives 8° 6′ 20″ for the mean longitude of Jupiter at the time of the epoch. As according to line 1, the rules for the mean longitudes of the planets refer to midnight at Avanti, the deduction of half a day's mean motion which had to be made in the case of sun, moon and moon's apsis is not required here.

We next turn to Mars. According to line 4, 1 revolution of Mars takes place in 687 days. The round number clearly shows the rule to be only an approximate one, and it now becomes our task to ascertain the exact determination on which it is founded. According to the published Súrya Siddhánta, Mars performs 1 revolution in 686·99,749,394 days, and it so might appear that the approximate value 687 presupposes the more accurate value 686·9,974... (if we neglect for the moment the small difference resulting from the slightly different number of the days of a yuga according to the two Súrya Siddhántas) and that consequently the Súrya Siddhánta of the Pañchasiddhántiká, as well as the known Súrya Siddhánta counts 2,296,832 revolutions of Mars to 1 maháyuga. But if on this assumption we try to explain the correction of Mars' mean place which is stated in line 8 and the kshepa mentioned in line 12, we are unsuccessful and conclude therefrom that our assumption has been premature. We therefore try the opposite course and proceed to deduce the number of revolutions which Mars performs in one yuga from the correction of fourteen tatparas for each revolution. If Mars, as the general rule teaches, performs 360° in 687 days, it passes through 14‴ in 0·000124 ... of a day. This fraction has therefore to be deducted from the approximate period of revolution, 687 days, when the remainder, 686·999874 ... days, indicates the accurate period of revolution. By this again we divide the days of the yuga (1,577,917,800). The quotient, 2,296,824, indicates that according to the Súrya Siddhánta of the Pañchasiddhántiká, Mars performs in one yuga 2,296,824 revolutions; which number agrees with that given in the Áryabhaṭíya, (p. 4) and likewise in the Pauliśa Siddhánta (Colebrooke's Essays, II, p. 365). This number finally explains the kshepa stated in line 12; for if we multiply by it the kalpády-ahargaṇa

and divide by the number of the days of a yuga, the remainder, which indicates the mean longitude of Mars at the time of the epoch, is 2ˢ 15° 35′.

Passing on to Saturn we find it stated in line 5 that 1000 revolutions of the planet occupy 10,766,066 days. One revolution therefore occupies 10766·066 days. The difference of this value from the corresponding value which results from the statements of the known Súrya Siddhánta, *viz.*, 10765·77307461, is too considerable for us to assume that the Súrya Siddhánta of the Pañchasiddhántiká should have agreed with the known Súrya Siddhánta in reckoning 146,568 revolutions of Saturn to 1 mahávuga. In order to find the number of revolutions actually acknowledged by the former work we therefore again have recourse to the correction of Saturn's mean longitude. As according to the latter (see line 8) 5″ have to be deducted for each revolution of Saturn, the period assumed for Saturn's revolution in the general rule is too short and has to be lengthened by the time which Saturn requires to pass through 5″ of a circle. That time amounts to 0·0007 ... of a day. This being added to 10766·066 and the days of a yuga being divided by the sum, 10766·0667, the quotient, 146,564, indicates the number of revolutions in one yuga. This result shows that here too the Súrya Siddhánta referred to by Varáha Mihira agreed with the Áryabhaṭíya and the Pauliśa Siddhánta while it differed from the known Súrya Siddhánta. Finally in order to explain the kshepa we multiply the kalpády-ahargaṇa by 146,564 and divide the product by the days of a yuga. The result—4ˢ 2° 28′ 49″—indicates the mean longitude of Saturn at the time of the epoch in strict agreement with line 9.

We now turn to Mercury and Venus whose periods of revolution are treated in the Indian systems as revolutions of their śíghras while the mean place of the two planets is supposed always to correspond to the mean place of the sun. The latter circumstance is mentioned in line 2. Lines 9 and 10 state the real period of revolution of Mercury and the rule for finding its mean longitude. A hundred revolutions are reckoned to 8,797 days; one revolution therefore occupies 87·97 days. The known Súrya Siddhánta gives to one yuga 17,937,060 revolutions of Mercury; to one of the latter therefore 87·969702 days. So far it might appear that the two Siddhántas agree with regard to the number of revolutions of Mercury; this supposition, however, does not confirm itself when we make use of the correction stated in line 14 for the purpose of deducing therefrom the number of Mercury's revolutions in one yuga. We find by proportion that Mercury takes 0·000005 of a day to pass through 4·5″ of a circle; we therefore subtract the fraction from 87·97 and divide by the remainder the days of a yuga, when the quotient, 1,793,700,

indicates the number of Mercury's revolutions. This number agrees neither with the one stated in the known Súrya Siddhánta (17,937,060) nor with the doctrine of Áryabhaṭa who reckons 17,937,020 revolutions of Mercury to one yuga (Áryabhaṭa, p. 6); on the other hand it does not differ from the number assumed in the Pauliśa Siddhánta (Colebrooke, Essays, II, p. 365). Mercury's kshepa finally is stated in line 17. We multiply the kalpády-ahargaṇa by 17,937,000 and divide by the days of a yuga. The result is 148° 17′ and about 6″; the last quantity is not stated by Varáha Mihira.

We conclude with Venus. According to line 15 it performs ten revolutions in 2,247 days, consequently one revolution in 224·7 days. According to line 16 we have to add 10·5″ for each revolution to the mean place of Venus as calculated in line 15. Venus passes through so many seconds in 0·00182 of a day. We deduct this amount from 224·7 and divide by the remainder the days of the yuga. The quotient, 7,022,388, indicates the number of revolutions that Venus performs in one yuga, a number in which the Súrya Siddhánta of the Pañchasiddhántiká again agrees with the Áryabhaṭíya (p. 6) and the Pauliśa Siddhánta, while the known Súrya Siddhánta reckons 7,022,376 revolutions of Venus to one yuga. Lastly to calculate the kshepa we multiply the kalpády-ahargaṇa by 7,022,388 and divide by the days of a yuga. The result is 8ˢ 27° 30′ 35″, which positive quantity is turned into a negative one by being deducted from an entire revolution or twelve signs. The remainder is 3ˢ 2° 29′ 25″ which quantity is equal to 332,965 seconds. The text says 332,961; but most probably we have to read (in line 18) **शर** instead of **शशि**, which emendation would remove the discrepancy.

In addition to the rules translated and explained in the above the chapter on "Súrya Siddhánta, madhyagati" contains a few more verses which as it appears state a so-called bíja to be applied to the positions of the planets resulting from the general rules. These verses, which together with those already quoted constitute the entire chapter, run as follows:

शेषाः खरेन्दुविकलाः प्रतिवर्षं* मध्यमच्चितिजे† ।
दश दश गुरोर्विशोध्याः शनैश्चरे सार्धसप्त युताः ॥
पञ्चाब्धयो‡ विशोध्याः सिते बुधे खाब्धिचन्द्रयुक्ताः§ ।
खखवेदेन्दुविकालिकाः शोध्याः सुरपूजितस्य मध्यात् स्युः ॥

"Seventeen seconds for each year are to be added to the mean place of Mars; ten to be deducted from that of Jupiter; seven and a half to be

* A. B. ॰वषमाध्य॰
† A. ॰जो B. जोः
‡ A. पंचाद्दयो B. पंचद्दयो.
§ A. खाब्धि॰ ॰युताः

added to that of Saturn; forty-five to be deducted from that of Venus; one hundred and twenty to be added to that of Mercury. Fourteen hundred seconds are to be deducted from the mean place of Jupiter."

These corrections call for no special remarks. As in similar cases, no special reason is given for the amount of the correction, it being understood that corrections of just that value will bring about a satisfactory agreement between calculation and observation. It is not said with whom the bíja originated; but we have no reason to doubt that it was Varáha Mihira himself who had perceived that the elements of the Súrya Siddhánta did not fully satisfy the requirements of his time. It is moreover noteworthy that the corrections proposed by Varáha Mihira for the Súrya Siddhánta do not differ very much from those proposed for the elements of the Áryabhaṭiya by Lalláchárya who is called the disciple of Áryabhaṭa. The passage from Lalla which refers to this point is quoted in the commentary on the Áryabhaṭiya (Kern's edition, p. 58) and runs as follows:

शाके नखाब्धिरहिते शशिनो ऽब्दखैस्तत्कृतः कृतघ्नैस्तमसप्पडङ्कैः ।
शैलाब्धिभिस्तुरगुरोर्गुणिते सितोच्चाच्छोध्यं त्रिपञ्चकृहते ऽभ्रराज्ञिभक्ते ॥
स्तम्बेरमाम्बुधिहते क्षितिनन्दनस्य सूर्यात्मजस्य गुणिते ऽम्बरलोचनैश्च ।
व्यामाग्निवेदनिहते विबुधोत्तमस्य शीतांशुसूनुकुजमन्दफलासु दृष्टिम् ॥

"Deduct 420 from the S'áka year, multiply it, for the moon, by 25, for the moon's uchcha by 114, for Ráhu by 96, for Jupiter by 47, for Venus' uchcha by 153, for Mars by 48, for Saturn by 20 and (for Mercury's uchcha) by 430; divide in all cases by 250. The resulting (minutes) are to be added to the minutes (of the mean places) of Mercury, Mars and Saturn (while they are to be deducted in the case of the other planets)."

This means that—the moon with her apogee and node being left aside — $\frac{47'}{250}$ = about 11″ for each year are to be deducted from Jupiter's mean place; $\frac{53'}{250} = 36''$ are to be deducted from the mean place of Venus; $\frac{430'}{250} = 103''$ are to be added to Mercury; $\frac{48'}{250} = 11''$ are to be added to Mars; $\frac{20'}{250} = 5''$ are to be added to Saturn. It will be observed that these corrections differ in no case very widely, in some hardly at all from those which Varáha Mihira proposes.

The last clause in Varáha Mihira's chapter on the mean motions of the planets according to which 1,400 seconds are to be deducted from the mean place of Jupiter must refer to a constant bíja to be applied to

the place of the planet at the epoch of the Karaṇa. It is too considerable for being considered as a yearly bíja; a bíja of the latter kind for Jupiter has moreover been stated in the preceding verse already.

Having gathered all the information which the Pañchasiddhántiká supplies regarding the mean motions of the planets according to the Súrya Siddhánta we now turn to the Romaka Siddhánta.

The information regarding the yuga adopted by the Romaka Siddhánta is contained in the 15th verse of the first adhyáya:

रोमकयुगमर्केन्दोर्वर्षाण्याकाशपञ्चवसुपक्षाः ।
खेन्द्रियदिग्गो ऽधिमासाः खरक्षनविषयाष्टयः* प्रलयाः ॥

"The lunisolar yuga of the Romaka (Siddhánta) comprises 2,850 years; (in these) there are 1,050 adhimásas and 16,547 omitted lunar days."

The first point to be noted with regard to this passage is that the yuga is called "arkendvoḥ," a lunisolar yuga, from which it might appear that the yuga of the Romaka Siddhánta comprised an integral number of revolutions of the sun and the moon only, while the yugas of the other Siddhántas as for instance the Súrya Siddhánta are founded on the revolutions of the other planets also. If this was really the case cannot as yet be settled with certainty. The Pañchasiddhántiká indeed extracts from the Romaka Siddhánta information about the motions of the sun and moon merely; but on the other hand a passage in the Brahmagupta Sphuṭa Siddhánta which will be quoted later on shows that Śrishеṇa treated also of the other planets. That he, however, in the construction of his astronomical periods considerably diverged from the other Siddhántas we are told by Brahmagupta himself in a passage occurring in the first chapter of his Sphuṭa Siddhánta:

युगमन्वन्तरकल्पाः कालपरिच्छेदकाः स्मृतावुक्ताः ।
यस्माद्न रोमके ते स्मृतिबाह्यो रोमकस्तस्मात् ॥

"Because the yugas, manvantaras and kalpas which are stated in the Smṛitis as defining time are not employed in the Romaka (Siddhánta), therefore the Romaka stands outside Smṛiti."

If we now inquire more closely into the nature of the period made use of in the Romaka Siddhánta, we observe at once that the number of the solar years as well as that of the intercalary months can be reduced by 150 so that we may say as well that 19 solar years contain 7 intercalary months or that 19 solar years contain 235 synodical months. In other words the yuga of the Romaka Siddhánta is founded on the well-known Metonic period. Nor is it a matter of great difficulty to

* A खक्षन॰ ॰ष्टयाप्रक्ष॰

find out why the Romaka uses instead of the simple Metonic period its 150th multiple. At first we have to ascertain the length of the solar year of the Romaka, by dividing the 1,040,953 civil days comprised in the entire yuga by 2,850, the number of years; when we obtain $365^d\ 5^h\ 55'\ 12''$; a result showing, as of course we might already have inferred from the mere use of the Metonic period, that the Romaka uses not the sidereal solar year the uniform employment of which is so marked a feature of later Indian astronomy but the tropical solar year. Nor again is there any room for doubt concerning the origin of this determination of the solar year. It is the tropical year of Hipparchus or if we like of Ptolemy who adopted his great predecessor's estimation of the time occupied by one tropical revolution of the sun without attempting to correct it although it is considerably too long. (*Cf.* Ptolemy's Syntaxis, Book III.)

It is certainly a matter of interest to meet in one of the oldest Siddhántas with an estimation of the year's length whose Greek origin it is impossible to deny. The comparison of the length of the year as fixed by the different Siddhántas on one side and the Greek astronomers on the other side is generally beset by considerable difficulties chiefly in consequence of the Hindú astronomers giving no direct information about the length of the tropical year, while the Greeks on their part speak in clear terms of the tropical year only, and oblige us to infer their opinions regarding the length of the sidereal year. It is of course easy enough to deduce the length of the one species of year from the length of the other if we are acquainted with the assumed yearly rate of the precession of the equinoxes. But it so happens that the determination of the latter point is in many cases by no means easy. To take for instance the (published) Súrya Siddhánta we easily derive from its data the length of its sidereal year, *viz.*, $365^d\ 6^h\ 12^m\ 36{\cdot}6^s$ and, if we avail ourselves of the amount of yearly precession as stated in its tripraśnádhyáya, *viz.*, $54''$, we find for the length of the tropical year $365^d\ 5^h\ 50^m\ 41{\cdot}7^s$, which is a determination much more correct then that of the Greek astronomers. But I quite share the suspicion expressed by Professor Whitney (translation of the Súrya Siddhánta, p. 246 ff.) that the passage of the tripraśnádhikára alluded to formed no part of the original Súrya Siddhánta, but is a later interpolation. It remains therefore uncertain by what process the length of the sidereal year of the Súrya Siddhánta was determined; the possibility of its being founded on the tropical year of Hipparchus and the Romaka Siddhánta is meanwhile not to be considered as altogether excluded.*

* The proposal made by Biot (Etudes sur l' astronomie Indienne, p. 29) to account for the sidereal year of the Súrya Siddhánta by considering it as the

Hipparchus himself basing on his calculation of the tropical year and on the Metonic cycle constructed a period of 304 (4 × 4 × 19) years *minus* one day = 111,035 days which period comprises 3,760 synodical months. (See Ideler's Chronology, I, p. 352.) The advantages of this period are that it comprises integral numbers of civil days and of lunar months and, very nearly, of tropical years while at the same time it implies nearly accurate estimations of the length of the year and the month, (*viz.*, $365^d\ 5^h\ 55'\ 15''$ and $29^d\ 12^h\ 44'\ 2{\cdot}5''$; the accurate figures according to Hipparchus being $365^d\ 5^h\ 55'\ 12''$ and $29^d\ 12^h\ 44'\ 3{\cdot}2''$). A period of this kind would, however, apparently not have suited Indian purposes. We here are met by one of the particular Indian requirements which helped to transform systems of Greek origin into the Indian systems with their strongly marked peculiarities. At the time when Greek astronomy began to act on India the calendar in prevalent use in the latter country was undoubtedly already the well-known lunisolar one with its tithis and intercalary lunar months. The peculiarity of this calendar is, that it does not inform one directly of the number of civil days which have expired from the beginning of the current year but only of the number of the elapsed lunar days or tithis. From the latter the number of civil days has to be derived by means of a proportion. And again in order to ascertain the number of tithis contained in a certain number of years antecedent to the current year, it is necessary at first to ascertain the number of intercalary lunar months which have occurred in the course of those years, a process requiring the employment of another proportion. We cannot enter in this place into a discussion of the reasons which may have led to the adoption of such an extraordinary and inconvenient style of calendar; for our purposes it is sufficient to know that it had established itself on Indian soil at an early period. It appears for instance in the Jyotisha-Vedáñga, although the form in which it there presents itself is a comparatively simple and primitive one, the writer of the Vedáñga neither having an accurate knowledge of the length of the revolutions of the sun and the moon nor being acquainted with the solar and lunar inequalities. At any rate it had taken a firm hold on the Hindú nation and when Greek notions and methods streamed in, they had to adapt themselves to the existing system. Thus the above described manner of calculating the number of civil days comprised in a certain period with its twofold transformation of solar years into lunar months and of lunar days into civil days required the establishment of

arithmetical mean taken between the sidereal year of Hipparchus and that of the Chaldeans has not much to recommend itself; the mean would not even be an accurate one.

periods containing integral numbers of all the different constituent elements, as otherwise the already laborious calculations would have become vastly more troublesome. For this reason the author of the Romaka Siddhánta formed his yuga of 2,850 years which is not only a multiple of 19 years, from which circumstance it follows that it comprises an integral number of intercalary months; but which in addition comprises as we have seen an integral number of civil days. That 150 is the smallest multiplier by which the desired purpose can be effected it is easy to see. The Romaka period has the additional advantage of being based on the exact tropical year of Hipparchus while the period of 304 years demands a lengthening of the year by 3 seconds.

From the verse translated above we moreover derive the length of the month according to the Romaka Siddhánta. Dividing the sávana days of the yuga by the number of its synodical months we obtain for the length of one synodical month $29^d\ 12^h\ 44'\ 2{\cdot}25''$. Further, adding to the number of the synodical months of the yuga the number of solar revolutions and dividing by the sum the number of sávana days, we arrive at a periodical month of $27^d\ 7^h\ 43'\ 6{\cdot}3''$. (It need not be mentioned that the periodical month of the Romaka is, like its year, a tropical one.) A comparison of these values with those assigned to the same periods by the Greek astronomers offers, owing to the particular nature of the case, no special interest. Hipparchus had found for the length of the synodical month $29^d\ 12^h\ 44'\ 3{\cdot}262''$* and this estimation might not improbably have been known to the author of the Romaka Siddhánta; but since, as we have seen above, the absolute equality of 19 solar years and 235 synodical months was insisted on, the length of the month had to be modified slightly.†

* This is the value resulting from Hipparchus's lunisolar period (about which see the following note). Ptolemy, as pointed out by Biot, Résumé de Chronologie Astronomique, p. 401, derives his value of the synodical month from the same period, arrives, however, from unknown reasons at a result differing in the decimal places of the seconds ($29^d\ 12^h\ 44'\ 3{\cdot}333''$) and employs this value in all his subsequent investigations.

† The above remark on the synodical month of course applies to the periodical month likewise. Although, however, I do not wish to enter in this place into a detailed comparison of the Greek and Indian determinations of the length of the month the following hints as to the course of procedure of the chief Greek astronomers may find a place. The lunisolar period employed by Hipparchus and described by Ptolemy in the 2nd chapter of the 4th book of the Syntaxis sets 126,007 days *plus* one hour equal on one side to 4,267 synodical months and on the other side to 4,612 sidereal revolutions of the moon *minus* $7\frac{1}{2}°$; the same period is said to comprise 345 sidereal revolutions of the sun *minus* $7\frac{1}{2}°$. On these equalities may be based in the first place a calculation of the length of the synodical month, in the second place

We now proceed to consider some verses which teach how to employ the general principles stated above for the purpose of calculating the mean places of sun and moon. They are found in the 8th adhyáya whose general subject is the calculation of solar eclipses according to the Romaka :

रोमकसूर्यो युगणात् खतिथिघ्नात् पञ्चकर्तुपरिहीणात् ।
सप्ताष्टकसप्तऋतेन्द्रियोद्धृतान्मध्यमाः क्रमशः ॥

(Without entering on the discussion of a few necessary emendations of the above text I at once proceed to render its undoubted sense.) "Multiply the ahargaṇa by 150, subtract from it 65 and divide by 54,787; the result is the mean place of the sun according to the Romaka." (From one of the following verses we see that the mean places of the Romaka are calculated for the time of sunset at Avanti.) I wish, with regard to the above verse as well as those verses which will be translated later on, to confine myself to the general part of the rule and not to enter for the present on a discussion of the additive quantity—the kshepa—which as we have seen when considering the corresponding rules of the Súrya Siddhánta is introduced for the purpose of enabling us to start in our calculations from the epoch of the karaṇa. The additive—or in this case subtractive—quantity (—65) being left aside the remainder of the rule presents no difficulties. As we have seen above the

a calculation, independent from the former one, of the length of the sidereal month and the sidereal year. Ptolemy when determining the mean motions of the moon exclusively avails himself of the first mentioned equation between 126,007 days *plus* one hour and 4,267 synodical months and—employing the mean tropical motion of the sun settled independently—derives therefrom the mean tropical motion of the moon. From the latter it is easy to calculate the length of the periodical (tropical) month, with the result $27^d\ 7^h\ 43'\ 7{\cdot}27''$, and from that again, if we avail ourselves of the value of the yearly precession which Ptolemy had accepted, *viz.*, 36″, the value of the sidereal month, for which we find $27^d\ 7^h\ 43'\ 12{\cdot}1''$. (Thus also in the Comparative Table of the sidereal revolutions of the planets, Burgess—Whitney's translation of the Súrya Siddhánta, p. 168.) Hipparchus on the other hand who had not settled a definite value of the annual precession would, in order to ascertain the duration of the sidereal month, most probably have made use of the second of the above-mentioned equations. The resulting length of the sidereal month is $27^d\ 7^h\ 43'\ 13{\cdot}57''$ (thus also Biot études sur l' astronomie Indienne, p. 44). A certain rate of the precession may be derived from comparing this sidereal month with the tropical month mentioned above (regarding whose length Ptolemy and Hipparchus agree if we set aside aside the insignificant difference resulting from the inadvertence of Ptolemy remarked on in the preceding note). Or again the rate of the precession may be calculated by comparing the length of the sidereal year which results from the third of the stated equations (*vide* $365^d\ 6^h\ 14'\ 11{\cdot}79''$) with the duration of the tropical year; we thus obtain for the annual rate 46·8″.

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sun performs 2,850 revolutions in 1,040,953 days. Both numbers can be reduced by 19. In order therefore to find the place of the sun at a given time or, in Indian terminology, for a given ahargaṇa, we multiply the ahargaṇa by 150 and divide the product by 54,787. The result represents the mean place of the sun in the tropical sphere.

In the same adhyáya we read the following rule for calculating the mean place of the moon :

खखरूपाष्टगुणाष्टघ्नात्क्रताष्टनवकैकवर्जिताद् द्यगणात् ।
त्रिविषवेचखकृताशापरिशुद्धान्मध्यमशीतांशोः ॥

(The translation will show what emendations of the text are required.) "Multiply the ahargaṇa by 38,100, subtract 1,984 and divide by 1,040,953 ; the result is the mean place of the moon."

The kshepa being set aside the rule is easy to understand. The multiplier is the number of the sidereal months contained in the yuga of the Romaka Siddhánta ; the number of the civil days of the same period forms the divisor. The quotient represents the mean place of the moon in the tropical sphere.

While the preceding rules regarding the mean places of sun and moon gave no information about the elements of the Romaka which we might not have directly derived from the statement concerning the nature of the yuga and were chiefly interesting as confirming the latter, a new element is furnished by the next following verse which refers to the anomaly of the moon :

शून्यैकैकाभ्यस्तान् नवशून्यरसान्विताद्दिनसमूहात् ।
रूपत्रिखगुणभक्तात् केन्द्रं शशिनो ऽस्तगमे ऽवन्त्याम् ॥

(Without translating the compound which refers to the kshepa, and only remarking that the last words are an emendation of शशिनोस्तगमवद्यां which is the reading exhibited by the manuscripts we render :) "Multiply the ahargaṇa by 110 and divide by 3,031 ; the result is the moon's kendra at the time of sunset at Avanti."

The last words indicate the time of the day from which the calculations according to the Romaka Siddhánta have to start and the Meridian employed ; they will not be considered here as they are important only if viewed in connexion with the kshepa. The kendra performing 110 revolutions in 3,031 days we obtain by division $27^d\ 13^h\ 18'\ 32{\cdot}7''$ as the time of one revolution of the kendra or, according to the Greeks' and our own terminology, of one anomalistic month. The manner in which we are here taught to calculate the moon's mean anomaly seems to be another interesting proof of the Romaka Siddhánta standing in a specially close relation to Greek astronomy. The Indian systems in general

do, as is well-known, not speak of revolutions of the moon's anomaly but of revolutions of the uchcha, *i. e.*, the apogee or the apsis, while the Greeks combined the motion of the apogee and that of the moon herself in the so-called restitution of the anomaly (ἀποκατάστασις τῆς ἀνωμαλίας) which corresponds to the modern anomalistic month and which we here meet with in the Romaka as the revolution of the kendra. I am aware that Hindu Astronomers occasionally calculate the position of the kendra in the same way, *i. e.*, without having recourse to the separate revolutions of the uchcha, and moreover it might be said that Varáha Mihira who reproduces the systems of his predecessors in a greatly condensed shape may have modified the rules of the Romaka Siddhánta in this special point, merely aiming at giving rules the results of which would be identical or nearly identical with those of the Romaka. But against this it is to be urged that in the next following chapter which treats of the calculation of eclipses according to the Súrya Siddhánta we meet with a rule for calculating the place of the uchcha which exactly agrees with the Súrya Siddhánta as known to us, and that therefore Varáha Mihira who faithfully reports the doctrine of one Siddhánta regarding this particular point may be expected to have done the same with regard to the other. Remembering therefore that in other points also, as shown above, the Romaka Siddhánta evinces more unmistakeable traces of Greek influence than the remainder of the Siddhántas, we shall most probably not err in considering its peculiar method of calculating the moon's mean anomaly as due to Greek models, while on the other hand the employment of separate revolutions of the uchcha as exhibited in the Súrya Siddhánta, etc. has to be viewed as an Indian innovation.

The rates of mean motion of the moon and her uchcha can of course be deduced from the rules extracted and translated in the above; they are, however, specially stated in another verse of the same chapter:

खनवनगाः शशिभुक्तिः खनवसुमुनयः शशाङ्ककेन्द्रस्य ।

"The (mean daily) motion of the moon is 790 (minutes); of the moon's anomaly 784 (minutes)."

These are of course mere "sthúla" values, of sufficient accuracy, however, for ordinary purposes.

The value of the anomalistic month which results from Hipparchus's lunisolar periods is $27^d\ 13^h\ 18'\ 34{\cdot}7''$. The small difference between this value and the one adopted by the author of the Romaka Siddhánta may be owing to the latter's wish to establish a not over long period containing integral numbers of revolutions of the kendra and of civil days.

We finally have to consider a verse which contains the rule for calculating the mean place of the moon's node. The latter part of the text of the verse is very corrupt:

अष्टकगुणिते दद्याद्रसतुंयमपटकपञ्चकान् राहोः ।
भवरूपाग्राष्टिहृते क्रमादुखान्योद्यते वक्रं* ॥

We are concerned only with the first half of the first line and the first half of the second line. The second half of the first line states the kshepa whose consideration we exclude; the second half of the second line is corrupt (the वक्रं, however, clearly indicates that the motion of the node is retrograde). "Tryashṭaka" has to be taken as meaning 24. The rule therefore directs us to multiply (the ahargaṇa) in the case of Ráhu by 24 and to divide by 163,111. From this it appears that the Romaka reckons 24 revolutions of the node to 163,111 days; one revolution therefore comprises $6{,}796^{d}\ 7^{h}$. This agrees very nearly with Ptolemy's determination (which we calculate from the mean daily motion of the node as determined by him) according to which one revolution of the node takes place in $6{,}796^{d}\ 14^{h}$, etc.†

From these statements regarding the yuga of the Romaka Siddhánta we now turn to the practical rule concerning the calculation of the ahargaṇa which is contained in the 8th, 9th and 10th verses of the first chapter where it follows immediately on the introductory verses quoted and translated above.

सप्ताश्विवेदसंख्यं शकाब्दमपास्य चैत्रशुक्लादौ ।
अर्धास्तमिते भानौ यवनपुरे सौम्यदिवसाद्ये ।
मासीकृते समासे द्विष्ठे सप्ताहृते ऽष्टयमपक्षैः ।
लब्धैर्युतो ऽधिमासैस्त्रिंशद्घ्नतिथियुतो द्विष्ठः ।
रुद्रघ्नः समनुशरो लब्धोनो गुणखसप्तभिर्युगणः ।
रोमकसिद्धान्ते‡ ऽयं नातिचिरे पौलिशे ऽप्येवम् ॥

"Deduct the Saka year 427, (*i. e.*, deduct 427 from the number of that Saka year for any day in which you wish to calculate the ahargaṇa) at the beginning of the light half of Chaitra, when the sun had half set

* So in B. A. has over क्रमा a rather indistinctly shaped letter which may be a द or perhaps an र and after that खांत्यते.

† We may notice here a mistake which has crept into the Comparative Table of the Sidereal Revolutions of the planets in Burgess—Whitney's translation of the Súrya Siddhánta, p. 168. The compiler of that Table when calculating the sidereal revolution of the node according to Ptolemy and the moderns apparently forgot that, the motion of the node being retrograde, the effect of the precession of the equinoxes is to render the sidereal revolution of the node not longer but shorter than the tropical revolution; he therefore added the difference due to the precession to the tropical revolution instead of deducting it. The real value of the sidereal revolution of the node according to the moderns is $6{,}793^{d}\ 10^{h}$, etc., and rather less than this quantity according to Ptolemy.

‡ A. B. •सिद्धान्तो.

in Yavanapura, at the beginning of Wednesday; turn (the number of solar years remaining after the deduction of 427) into months, add the months, (*i. e.*, the elapsed lunar months of the current year), put the result down in two places, multiply it (in one place) by 7 and divide by 228, add the resulting adhimásas (to the number of months obtained above); multiply the sum by 30, add the tithis, (*i. e.*, the elapsed tithis of the current month), put the result down in two places; multiply it (in one place) by 11, add 514 and (divide) by 703; deduct the quotient (from the number of tithis found above). The final result is the (sávana) ahargaṇa according to the Romaka Siddhánta; in the Pauliśa too it is not very much different."

The above is a very concisely stated rule for a rough calulation of the ahargaṇa, *i. e.*, the sum of civil days elapsed from a certain epoch down to a given date. The general principles of the calculation do not differ from the usual ones and therefore stand in no need of elucidation. Concerning the details we have in the first place to notice that the Śaka date 427 has to be deducted from the given sum of years. This means of course that the ahargaṇa is to be calculated from the end of the 427th year of the Śaka era. The question remains whether 427 Śaka elapsed is to be taken as the time when the Romaka Siddhánta was written or at least is the epoch fixed upon by the author of the Romaka Siddhánta as the starting-point of his calculations, or whether the named year represents either the time of the composition of the Pañchasiddhántiká or the epoch selected by Varáha Mihira himself. The former alternative is indeed *primâ facie* the much more probable one as the date appears in the text in connexion with other details which certainly originally belonged to the Romaka and not to Varáha Mihira. The latter alternative can, however, not be rejected altogether; for it is by no means impossible that while the principles of the calculation of the ahargaṇa are taken from the Romaka, the particular date from which it starts might have been chosen by Varáha Mihira himself. It is moreover the habit of the writers of karaṇa-granthas to take for their epoch either the year in which their book is actually composed or at least some very near year. And finally Albírúní as well as the Hindú Astronomers of Ujjain who in the beginning of this century furnished Dr. W. Hunter with the list of astronomers published by Colebrooke (Algebra, p. xxxiii) took 427 as the date of Varáha Mihira himself (*Cf.* Kern, Preface to the Bṛihat Saṃhitá, p. 2.) On the other hand as Prof. Kern points out, it is certainly most improbable that Varáha Mihira whose death has been ascertained by Dr. Bhau Daji to have taken place in 587 A. D. should have written the Pañchasiddhántiká in 505 already. The other argument adduced by Prof. Kern against 505 being the date of the Pañchasiddhán-

tiká is that the latter work quotes Áryа Bhaṭa who was born in 476 only and therefore is not likely to have been referred to in 505 already as a writer of authority. Matters lie, however, somewhat differently. We know from a passage of Brahmagupta which will be quoted later on, that Śrísheṇa the author of the Romaka Siddhánta had borrowed some of the fundamental principles of his astronomical system from Áryabhaṭa. Now Áryabhaṭa's first work (for it is not likely that he began to write before the age of twenty-three) having been composed in 499, the assumption that 505 marks the time of the Pañchasiddhántiká would compel us to conclude that Śrísheṇa's work was written in the short interval between 499 and 505, and had then already become famous enough to be esteemed one of the principal five Siddhántas. Such a conclusion does certainly not recommend itself, and we may safely I think assume that 505 is either the year in which Śrísheṇa's work was written or else the year selected by him for the starting-point of his calculations, and therefore not far remote from the year in which he wrote. For the date of the Pañchasiddhántiká there would finally remain the period from 505 to 587. I should, however, be unwilling to assign it to a later date than perhaps 530 to 540; for if its composition was removed by too great an interval from 505, it is improbable that Varáha Mihira should have kept the latter year as his epoch and not have introduced a more recent one.

We return to the ahargaṇa rule. The days are to be counted from sunset, a practice which we do not elsewhere meet with in India while it is known to have been generally followed by the Greeks; another proof for the particularly intimate dependance of the Romaka on Greek science. The years which have elapsed from the epoch are turned into months (in the usual way, by being multiplied by 12) and the elapsed months of the current year are added. Then by a proportion resulting from the yuga of the Romaka the intercalary months are calculated (7 intercalary months are to be added to 228 months; how many to the given number of months?). The number of the months is then multiplied by 30, and from the number of tithis found in that way the number of omitted lunar days (tithi kshaya) is derived by another proportion, which is, however, merely approximate. Since, as we have seen above, the Romaka reckons 16,547 omitted lunar days to the yuga (which comprises 1,057,500 tithis), 703 lunar days comprise $11 + \frac{41}{1057500}$ omitted lunar days, while the proportion made use of for the calculation of the ahargaṇa neglects the fraction. The additional quantity 514 does not occupy us because, as stated above, we exclude for the present the consideration of the epoch of the Romaka Siddhánta and the kshepa-quantities connected with it.

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An identical rule for the calculation of the ahargaṇa is not found anywhere else in Indian astronomy (as indeed it cannot be on account of the prevailing employment of the sidereal solar year) with one exception. The rules of Siamese astronomy which have been alluded to above teach the calculation of the ahargaṇa (or as it is called there horoconne—I quote from the account of Siamese astronomy given by Bailly in his Traité de l' astronomie Indienne et Orientale) according to exactly the same method. The kshepa-quantities differ on account of the Siamese rules starting from a different epoch. But the proportions $\frac{7}{228}$ and $\frac{11}{703}$ are both made use of. The use of the latter proportion is of no particular interest; for the proportion is only approximately correct, and does not allow of any certain inference regarding the length of the synodical month being founded on it. It is in fact—if I am not mistaken—occasionally used by karaṇa writers who deal with the sidereal year only. But the former proportion as clearly pointing to a tropical solar year is noteworthy, all the more as the Siamese rules nowhere directly acknowledge the tropical year but uniformly employ the sidereal one. It did in fact not escape the attention of Cassini who inferred from it that a tropical year of $365^d\ 5^h\ 55'\ 13''\ 46'''$ had originally been known to the Siamese, and remarked that such a year differed by two seconds only only from Hipparchus's year. We are now able to maintain that the two years originally did not differ at all, and that the later small divergence is merely due to the inaccurate proportion $\left(\frac{11}{703}\right)$ which for reasons of convenience was preferred to the accurate one.

We finally have to consider an interesting stanza in the 11th chapter of Brahmagupta's Sphuṭa Siddhánta which contains some information about the sources from which the elements of the Romaka Siddhánta were derived. The two manuscripts of the Sphuṭa Siddhánta at my disposal are unfortunately so incorrect that only a part of the stanza is intelligible; what interests us more particularly can, however, be made out I think. One manuscript (containing the text of the Sphuṭa Siddhánta only) reads:

युक्त्यार्यभटोक्तानि प्रत्येकं दूषणानि योज्यानि ।
श्रीखेनप्रभृतीनां कानिचिदन्यानि वक्ष्यामि ॥
लाटासूर्यशशाङ्कौ मध्याविन्दूच्चपातौ च ।
कुजबुधशीघ्रबृहस्पतिसितशीघ्रशनैश्चरान् मध्यान् ।
युगपातवर्षभगणान् वासिष्ठाब्देन युगादिकृतपादात् ।
मन्दोच्चपरिधिपात्तस्पष्टीकरणाद्यमार्यभटात् ।
श्रीषेणेन गृहीत्वारन्नोच्चपरोमकात् कृतः कंथा ।

The other manuscript (E. J. H. 1304) which contains parts of the Sphuṭa Siddhánta with the commentary by Pṛithúdaka Svámin reads:

Comm.: यानि संभवंति तान्यार्यभटदूषणानि श्रीषेणादीनां योज्यानि इत्येतदार्ययाह ।

Text: युक्त्यार्यभटोक्तानि प्रत्येकं दूगणानि योज्यानि ।
श्रीषेणप्रभृतीनां कानिचिदन्यानि वक्ष्यामि ॥

Comm.: गतार्थेयमार्या। इदानीं श्रीषेणाचार्येण कृतो रोमकसिद्धांतो यश्च वासिष्ठो विष्णुचंद्रेण यतो दूषणमार्याचतुष्टयेनाह ।

Text: आर्यान्सूर्यशशांकौ मध्याविंदूच्चचंद्रपातौ च । कुजबुधशीघ्रबृहस्पतिसितशीघ्रसनिश्चरान् मध्यान् । युगयातवर्षे भगणान्वासिष्ठान्विजयनंदिकृतपादान् । मंदोच्चपरिधिपातान्दृष्टीकरणाद्यमार्यभटात् । श्रीषेणेन गृहीत्वा रक्षोच्चरारोमककृतकर्थः इत्यादि ।

What chiefly concerns us in the above extract (the text of which it is not possible to emendate in all places without the help of further manuscripts) is the fact of Áryabhaṭa and Láṭa being mentioned among the predecessors of S'rísheṇa. The Romaka Siddhánta, in that shape at any rate which was given to it by S'rísheṇa, is therefore later than Áryabhaṭa and was as we have remarked above most probably composed in 505. It borrowed from Áryabhaṭa, as we see from the line मंदोच्च॰, all those processes which are required for finding the true places of the planets. On the other hand it adopted from Láṭa all those rules by means of which the mean places of the planets are calculated.* Láṭa therefore appears to have been that Hindú astronomer who first borrowed from the Greeks the tropical year of Hipparchus, the Metonic period, etc. This would agree very well with the other notice, quoted above, which the Pañchasiddhántiká furnishes concerning Láṭáchárya, *viz.*, that according to him the beginning of the day was to be reckoned from the moment of sunset in Yavanapura. It is greatly to be regretted that the Pañchasiddhántiká does not treat of the mean motions of the planets other than sun and moon according to the Romaka Siddhánta; as these also were, according to Brahmagupta, borrowed from Láṭa they would most likely correspond with the mean motions as determined by Hipparchus more closely than the mean motions resulting from the cycles of the Súrya Siddhánta and the Áryabhaṭíya. If the Romaka Siddhánta by S'rísheṇa was composed in 505 as appears very likely Láṭa would have to be considered at least as a contemporary of Áryabhaṭa; but considering the specifically Greek character of his astronomy I think it much more likely that he preceded him.

* The reading आर्यान्सू॰ of the E. J. H. manuscript (instead of लाटासू॰ of the other manuscript) is clearly wrong. In the first place Árya could hardly be used for Áryabhaṭa; secondly, the mean motions of the Romaka are not those of Áryabhaṭa; thirdly, the indebtedness of the Romaka to Áryabhaṭa is stated in the later line मंदोच्चपरि॰

A doubt concerning Láṭa's position might arise from the introduction of the Pañchasiddhántiká in which it is remarked that the Pauliśa and Romaka Siddhántas were "vyákhyátau" by Láṭadeva. This Láṭadeva is either to be considered as a writer altogether different from that Láṭa to whom Śrisheṇa was indebted for a part of the elements of his Siddhánta, or else we must suppose that Śrisheṇa's Romaka Siddhánta was only a recast of an older Romaka Siddhánta which was written or commented on by Láṭa. The latter remark perhaps applies to the Pauliśa Siddhánta also, and we must here remember that, as Prof. Kern has shown, Utpala distinguishes between the Pauliśa Siddhánta and a Múla Pauliśa Siddhánta.

We may in conclusion sum up in a few words the chief results following from the consideration of those parts of the Pañchasiddhántiká which form the subject of this paper. In the first place it appears that the rules of the Súrya Siddhánta known to Varáha Mihira differed very considerably from the corresponding rules of the Súrya Siddhánta which has come down to us while they agreed partly with the Áryabhaṭiya partly with the Pauliśa Siddhánta as represented by Bhaṭṭotpala. It follows that in any inquiries into the earliest history of modern Indian astronomy the existing Súrya Siddhánta is not to be referred to, at any rate not without great caution. In the second place we are enabled, by what we have learned about the Romaka Siddhánta, to go back beyond Áryabhaṭa and the Súrya Siddhánta, and to gain an insight into the very beginning of modern Hindú science when it still wore the unmistakeable impress of its Greek prototype and had not yet hardened into its distinctive national form.

APPENDIX.

I take this opportunity of showing by some more examples how practical Hindú works on astronomy facilitate their calculations by at first employing greatly reduced numbers and afterwards making up for the resulting errors by applying corrections. In the astronomical tables alluded to in the preceding paper which Bailly calls the tables of Narsapur, a period is employed for the calculation of the moon's mean place which is yet considerably simpler than the one which according to Varáha Mihira may be constructed on the elements of the Súrya Siddhánta. We are there directed to multiply the ahargaṇa by 800 and to divide by 21,857. Eight hundred revolutions of the moon comprising 21,857 days, one revolution would be equal to $27^{d}\ 7^{h}\ 42'\ 36''$. But a correction is stated to the effect that the given ahargaṇa is to be divided by 4,888 and the quotient, taken as indicating degrees, is to be deducted from

the mean place of the moon as found from the general rule. This is as much as saying that $\frac{1}{4888}° = 0{\cdot}7365''$ for each day of the ahargaṇa are to be deducted. Multiplying this quantity by the duration of the periodical month as stated above ($27^d\ 7^h$ etc.) we obtain $20{\cdot}1218''$. So many seconds of the circle are passed through by the moon in $35{\cdot}65''$. We add the latter quantity to the duration of the month and thus obtain $27^d\ 7^h\ 43'\ 12{\cdot}65''$, which is almost identical with that duration of the sidereal month which results from the elements of the published Súrya Siddhánta and differs very little only from the duration of the month presupposed by the Súrya Siddhánta of the Pañchasiddhántiká. Bailly supposes that that estimation of the month which results from 800 revolutions being considered equal to 21,857 days was the original one, and that the stated correction was added later for the purpose of bringing about an equality between the results of the tables of Narsapur and the tables of Krishnapur (which are likewise described by Bailly, Traité, etc., p. 31 *ff.*). But matters have doubtless to be explained differently. The author of the tables of Narsapur was acquainted with the Súrya Siddhánta from which he derived his knowledge of the length of the sidereal month. He, however, aimed at replacing the inconveniently big numbers of the Súrya Siddhánta by smaller ones—in the same way as Varáha Mihira does in his account of the Súrya Siddhánta, went, however, a step further than the latter astronomer by reducing the period of 900,000 revolutions to its 1125th part, *i. e.*, 800 revolutions. Dividing the 24,589,506 days of the former period by 1,125 we get $21857 + \frac{381}{1125}$. The moon's mean place is then calculated at first without the fraction being taken into account; but the error arising from this neglect is too considerable to be neglected, and so the above stated correction is applied finally.—We have to account in an analogous manner for the origin of the correction of the sun's mean place which the tables of Narsapur apply (Bailly, p. 54). The period comprising 800 revolutions of the sun which is employed there immediately presupposes a year of $365^d\ 6^h\ 12'\ 36''$ while the year of the Súrya Siddhánta is longer by $0{\cdot}56''$. To make up for this difference $2''$ for each period of 87 years are deducted from the sun's mean place as calculated from the 800 year period. For if the year has been estimated $0{\cdot}56''$ short of its real length the error amounts in 87 years to $48{\cdot}7''$, and in so much time the sun passes through two seconds of the circle. It thus appears that here again the correction had not the aim of reconciling two sets of astronomical tables but was contemplated by the author of the Narsapur tables at the outset.

ADDENDUM

(*To Mr. V. A. Smith's paper on the Gupta Coins, p.* 119.)

Coins latély procured by Mr. H. Rivett-Carnac, C. S., C. I. E. in Benares bazar :—

1. Chandra Gupta I ; King and Queen type ; legends legible ; as Plate II, 2. A good specimen.
2. Chandra Gupta II ; Archer Type lotus-seat reverse, as Plate III, 1.
3. Kumára Gupta Mahendra ; Archer Type ; कु मा र under arm, on margin 'Mahárája' ; *rev.* as usual.
   Obv. differs in legend, and in pose of figure from Plate III, 10. A fine specimen.

ERRATA.

P. 119, *l.* 19 *read* Ghaṭotkacha, *for* Ghaṭot Kacha, *and so throughout Mr. Smith's paper on the Gupta coins.*

„ 128, „ 24 *omit* ' or *jalampa*.'

Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Fig. 6

Fig. 7

Fig. 8

Fig. 9

Fig. 10

Fig. 11

Fig. 12

Fig. 13

Fig. 14

SELECT GOLD COINS OF THE GUPTA PERIOD.

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Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Fig. 6

Fig. 7

Fig. 8

Fig. 9

Fig. 10

Fig. 11

Fig. 12

Fig. 13

SELECT GOLD COINS OF THE

GUPTA PERIOD.

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Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

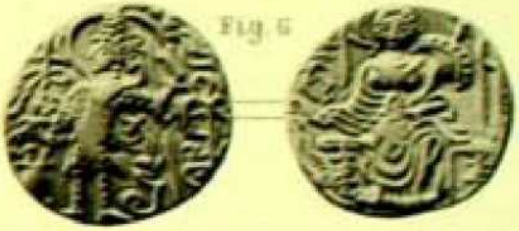


Fig. 6

Fig. 7

Fig. 8

Fig. 9

Fig. 10

Fig. 11

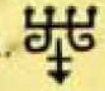
Fig. 12

SELECT GOLD COINS OF THE

GUPTA PERIOD.

MONOGRAMMATIC EMBLEMS.

Class I. *4 Prongs or dots above line.*

1. 
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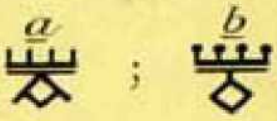
4. 
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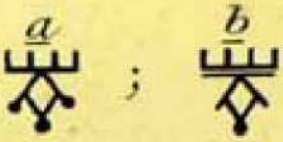
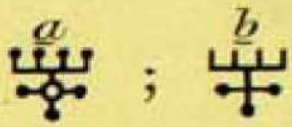
6. 
7. 

Class II. *3 Prongs or dots above line.*

8.
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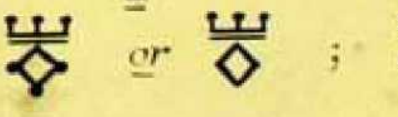
17.

18.
19. 

Class III. *No Prongs or dots above line.*

20.
21.
22.

23.
24.
25.

V. A. Smith, del.

Lith. & Printed by W. Newman & Co., Ld. Calcutta.

SELECT GOLD COINS OF THE GUPTA PERIOD.

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1

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4

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RAMTINKIS.

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JOURNAL

OF THE

ASIATIC SOCIETY OF BENGAL.

Part I.—HISTORY, LITERATURE, &c.

No. I.—1884.

An Examination of the Trade Dialect of the Naqqásh or painters on papier-maché in the Panjáb and Kashmír.—*By* CAPT. R. C. TEMPLE, B. S. C., F. R. G. S., M. R. A. S., &c.

In the Selections from the Records of the Panjáb Government, Section I, 1882, are some *Linguistic Fragments* by Dr. Leitner. Among these "fragments" at p. xviii, are some words and phrases, used by the Naqqásh or papier-maché painters of the Panjáb and Kashmír as a trade dialect or *argôt*, and also at pp. 2 & 3 of the Appendix is a long list of numerals used by the shawl-weavers of Kashmír and the Panjáb.

The list of Naqqásh words is not very long and as they will all undergo examination in the course of this paper, I give them here in full, taking no further liberties with them than to re-arrange them to suit my remarks.

Dialect of the Naqqásh at p. xvii. of Leitner's "*Linguistic Fragments.*"*

Numerals.

1	ékam.	9	athwatir ékam.
2	hándish.	10	za-atilàq.
3	yéndir.	15	tre-atalaq.
4	tzownter.	20	tzòr-átalaq.
5	atiláq.	25	páu-dùkh.
6	shánk.	50	odh-dùkh.
7	shánk ékam.	100	dùkh.
8	hásht berìk; athwotur.		

* The transliteration is Dr. Leitner's.

General Nouns.

master, lánka.	disease, máshilád.
wood, hîma.	physician, nabzuwól.
house, shop, pánzir.	man, dohun.
word, nái.	woman, woïn.
painting, tëll.	mother, bajùr.
salt, tókkun.	father, old, dóddur.
sugar, tokuwùn.	daughter, putz-kät.
tea, zal.	son, pûtze.
tobacco, panyúl.	thief, poshumut.
huqqa, panyúl-dotsh.	colour, riûg.
paper, rikkìn.	night, krishor.
mouth, mûr.	day, zàdd, zàrr.
eye, zü-tüün.	stomach, gúnna.
qalamdán, zákkir.	water, zal.
rice, gúnne.	jewelry, dijphùl.
bread, béretz.	hair, kiöpush.

Verbs.

be silent, mùnn.	to say, ask, párun.
to see, natzun.	to be, záddùn.
see, natzo.	to go, sandùn.
to bear, wendun.	to take away, sorwùn.
hear, wéndo, wendùs.	to sing, bomburùn.
to die, be ill, máshiran.	

Coins.

rupee, gash.	*paisá*, böt.

Adjectives.

sweet, tokuwùn.	good, sodd.
little, cheap, kîs.	bad, nàzz.
much, dear, grûtz.	ill, mashilad.

I had in 1882 an opportunity of testing at first hand, though on a small scale, both the above list of words and the shawl-weavers numerals given by Dr. Leitner, and I found them to be in the main correctly recorded, *i. e.*, according to my own ear, if I rightly read his somewhat puzzling transliterations. I should, however, like to make a few remarks and additions.

The Naqqásh I examined were Kashmírís, but Dr. Leitner's were apparently Panjábís.

The Naqqásh words especially tested by me are given in the following list :*

* In this list Dr. Leitner's words are according to his own transliteration, mine are given in that adopted by the Society.

Naqqásh words.

Leitner.	*Temple.*
house, pánzir.	páṇzir, liṛ.
be silent, mùnn (and baguwìn, milk, *sic.*)	múṇ.
salt, tókkun.	tókkun, tókawan.
sugar, tokuwùn.	tókkun, tókawan, tókuwun, (baguwún, sweet).
paper, rikkín.	rikkín.
rupee, gash.	gásh, gás.
good, sodd.	sodd.
bad, nàzz.	náz.
to go, sandún.	sandún.
go	sand.
man, dohun.	dúh.
woman, woïn.	kollai.
mother, bajùr.	mozh.
daughter, putz-kät.	putsakut.
son, pútze.	pútsa.
thief, poshumut.	póshumut, wusagun.

It will be observed from the above list that the words agree practically throughout.

Liṛ, ghar and páṇzir were given me as alternatives for house, the ṇ in the last word being a distinct and strong cerebral nasal, and the ṛ of liṛ being also strongly cerebral. I heard the cerebral ṇ again in múṇ, "be silent," and perhaps Dr. Leitner means his mùnn to represent a hard or cerebral sound.

Dr. Leitner gives the imperative as ending in *o*, *e. g.*, natzo, see thou; wéndo, hear thou, (but also wendùs, regarding which see below). However, as far as I could make out, the imperative is the plain stem. Thus, sandún, to go, sand, go; walún, to come, wal, come. The instances at hand altogether are so few, and my attempts to get *sentences*, as I will show hereafter, so unsuccessful, that nothing can really be said as to what the imperative is.

Dr. Leitner uses all three accents á à â over his vowels and it is hard to say therefore what the force of each is in the absence of an explanatory note. The difference, therefore, observable between his vowels and mine may be merely graphic and not real.

In three words I could not get the Naqqásh to give Dr. Leitner's forms, *viz.*, for "man, woman and mother." Also the words for salt, sugar and sweet present a very remarkable peculiarity. It will be ob-

served from the lists above given that they are practically *the same!* After considerable enquiry all I could elicit from the men was that the words *were* the same, and that the sense depended on the context! Lastly, under "be silent," and apparently by mistake, Dr. Leitner has given "baguwùn (milk)." This word, as far as I could make out, is a synonym for "sweet."

I would also observe that the marked cerebralization of the vowel sounds makes it very hard to record the dialect as it falls on the ear. The same is observable in dialectic Panjábí, *e. g.*, the first *á* in áṇṇá, gáhṇá and the *a* in banhṇá. Dr. Leitner's putz-kät and my putsakut, daughter, is a particularly difficult word to express, owing to the closeness of the vowels, which is such as one hears in the Pashto about Quetta and the Pishin. The final vowel in pûtze or pútsa, son, is the final German vanishing *e*, which is, and is not, heard. As regards this, I think there is no doubt, that in order to record a dialect such as this properly, one ought to come to it prepared with a carefully selected set of vowel equivalents, or one will fail to give the living force of it.

To pass on to sentences. I made a short list of such sentences as are usual when testing a dialect or new language, in order to find out the forms of the tenses, &c., and began to run down it, but the result was not satisfactory, and after seven of them had been gone through, the Naqqásh were either tired or sulky, for they said it was "a sin to talk anything but sîḍhâ bât (*sic*)" and would give me no more words or sentences. I accidentally elicited that they do not talk their peculiar dialect, but "sîḍhâ bât" to their women. Here are some of my sentences.

Go quickly, loghaṛ loghaṛ (لغڑ) sand.

Go slowly, sechiṛ sechiṛ sand, loṭ loṭ gás.

These are natural enough, but the next upsets all testing of the verb "to go."

Go there, dahinishnish.

Now for the verb "to come"; we have—

Come quickly, jal jal wal.

Come slowly, loṭ loṭ wal.

And then again one is fairly taken aback by such a sentence as the following:

Come here, áí sapan.

There is only one more sentence and that is a doubtful one.

Make this, kom kar (? for the Hindí kám kar).

There is a difficulty always present in such attempts, *viz.*, that the examinee will always try and palm off Kashmírí or Panjábí words on you as those of his own dialect: will insist, in fact, on talking "síḍhá bát."

Now the question is, are these Naqqásh words part of a *bonâ fide* dialect, some relic of a past language in Northern India, or are they merely an *argôt*, a more or less conscious formation of words for the purposes of secrecy? I think the answer will eventually be, when there are more *data* than at present available to go upon, that the bulk of the words are really dialectic and traceable to surrounding idioms, or to the former stages of the modern Aryan languages, but that in some cases words have been inverted and nonsense syllables prefixed or affixed in order to hide their true form. *E. g.*, náth=thán, place; gaukhá=gazkhá=kághaz, paper; (pu)-chhá-(rí)=chha, six, and so on. Such methods are no more uncommon in India than among thieves, bad characters, and children in Europe.*

There is only one way of ascertaining the answer to the question above propounded, and that is, by comparison of the Naqqásh trade dialect with such others as are available and with the surrounding idioms and ancient tongues of Northern India. The dialects at present available to me are the Naqqásh, the Zargarí of Kashmír, the Zargarí of the Panjáb, the Zargarí of the North West Provinces, the dialect of the carpenters, blacksmiths and masons of Kashmír, of the shawl-weavers of the Panjáb and Kashmír, of the so-called Khurásání Magadds, and of the Changars. The languages I propose to compare the above with are Kashmírí, Panjábí, Hindí, Prákrit and Sanskrit, and secondarily with Persian and Arabic.

The authorities consulted for the words in the comparative tables given in this paper are—

Dr. Leitner, *Linguistic Fragments*, 1882, pp. v-vii, xvi-xviii, and xxii, appendix pp. 2 and 3. *Sketch of the Changars*, 1880, p. 12.

Elliot, *Races of the North West Provinces*, Beames's Ed., 1869, vol. i, pp. 160-1 and footnote by Beames.

Lodiáná Panjábí Grammar, 1854, p. 82.

Kellogg, *Hindí Grammar*, pp. 94—108.

Platt, *Hindústání Grammar*, pp. 49—50, and foot notes, 85—6 and 112.

Whitney, *Sanskrit Grammar*, §§ 475—89.

All the above names of tribes and trades speak for themselves excepting the Khurásání Magadds and the Changars. The former were a band of foreigners, who infested the Panjáb in 1868-72, and who said they were Khokándís or Persians, but Dr. Leitner (p. xii.) seems to think they were Persian Gypsies with a long residence in India. The latter are a humble tribe, harmless enough in their way, to be found

* See Appendix to Dr. Leitner's *Analysis of 'Abdu'l-Ghafúr's Dictionary*, 1880, p. xviii, and his *Linguistic Fragments*, pp. xiv, xv.

performing lowly occupations, in several parts of the Panjáb. They have a real dialect or language of their own.

For the purposes of comparison, and for noting the results that such may show, I select the numerals first, as being the easiest to trace, the most likely to be found complete in all dialects, the least liable to inflection and, excepting perhaps the pronouns, the most persistent words in all languages.

The following is a comparative table of the numerals in all the dialects and languages mentioned above.

(See Table I, next page.)

In order to sift the words in these tables, those which are compounds of each other and also those which, though used for numerals, are really foreign to any numerical system must be first eliminated. All such words are shown in italics in the tables. They commence at the number 5. Thus—

5. atiláq, hatlaq, attiláng, lámman, all mean the hand, the "bunch of fives." kanzün = half-ten.
6. kanzün-te-bin is half-ten + one = 6.
7. shánk-ékam is 6 + 1; kanzün-te-handish is half ten + two = 7; lámman-aur-sanní is 5 + 2 = 7.
8. kanzün-te-yindir is half ten + three = 8; böd-tsor is twice four = 8; and lámman-aur trewáí is 5 + 3 = 8.
9. athwatir-ékam is 8 + 1 = 9; bin-kam-zün is one less ten = 9.
10. böd-attiláng is twice five = 10; do-lamman is twice five = 10.
15. tre-ataláq is three times five = 15; dod-zün is $1\frac{1}{2}$ times ten = 15.
20. tsor-ataláq is four times five = 20; ha-zün is twice ten = 20.
25. paú-dúkh is one quarter hundred = 25; daí-zün is $2\frac{1}{2}$ times ten = 25; ha-zün-te-ataláq is twice ten + five = 25; ha-zün-te-kan-zün is twice ten + half ten = 25.
50. oḍh-dúkh is half a hundred = 50; rúm-do is five times ten (? ten times five) = 50; kan-wát is half a hundred = 50; tál-sér is half a hundred = 50; pándo-lísa is five twenties = 100.

100 sér is 100 as being the old ser of 100 tolas.*

The elimination of these leaves us only *bonâ fide* numerals, whether separate words or compounds, to deal with. Of these a large number in all the trade dialects are directly connected and descended from Prákrit and Sanskrit, and it is to be noted how persistently the Sanskrit termination *an* occurs. But it must be admitted that a considerable residue still remains which defies classification.

* The ser is now 84 tolas.

TABLE I.—*Cardinals.*

Numerals.	Naqqáshí.	Zargarí Kashmírí.	Tarkhán, &c. Kashmírí.	Shálsáz Kashmírí.	Zargarí Panjábí.	Zargarí Hindustání.	Khurásání Magaddí.	Changarí.	Kashmírí.	Panjábí.*	Hindí dialects.*	Prákrit.	Sanskrit.	Persian.	Arabic.
1	ékam	bin, hább	ák, ních	nal, nalas	akára	mánu	ekátt†	ek	ák	ikk	ek, ik, yek, ekam, kam, ekna, kan	ekka	eka	yak	aḥad, wáḥid, iḥḍa, wáḥida.
2	hándish	handísh, handish	wíng	don	sanní	saunán	doátt	tór, torá, tórat	zü, zih	do, taká	doj, dwai, dwan, dúj dúná, dú, doh, don	do	dwi	du	iṣnán, ṣinán.
3	yéndir	yandir, yindir.	wurún	trin	trewáí	ekwáí	seátt	teg, tegá, tegat	tre	tinn, trai	tíni, triyá, tíj, tí, tíná, ti, tih.	tiṇṇi	tri	sih	salása, salás.
4	tsauntar	kárr	tyor, ser	san	airan	ahirin	chrátt	chang, changá	tsór	chár	chári, chárik, chau, chauká	chattári	chatur	chuhár	arba'.
5	*atiláq, hatlaq*	rúm, *kanzün*	*attiláng*	phantian	*lámman*	pálo	panjátt	pándo	pánts	panj	panje	pancha	panchan	panj	khams.
6	shánk	kha, *kanzün-te-bin.*	shúpp	shin	chélí	puchhári	sheshátt	chéblu	che	chhe	chhah, chhatth, chhakká	chha	shash	shash	sitt.
7	*shánk-ekam*	phál, *kanzün-te-handish*	.....	sáthan	*lámman-aur-sanní*	paint	hafátt	satélu	sát	satt	satte, sat	satta	saptan	haft	saba'.

* In the Panjábí and Hindí Dialects columns, words are included other than cardinal numbers, because what may be now an ordinal or multiplicative form in them, may have a common derivation with the cardinals of the trade dialects. Transliterations have been made uniform for purposes of comparison.

† átt = ? hátt = ? háth, hand.

TABLE I.—*Cardinals.*—(Contd.)

Numerals.	Naqqáshí.	Zargarí Kashmírí.	Tarkhán, &c. Kashmírí.	Shálsáz Kashmírí.	Zargarí Panjábí.	Zargarí Hindustání.	Khurásání Magaddí.	Changarí.	Kashmírí.	Panjábí.*	Hindí dialects.*	Prákrit.	Sanskrit.	Persian.	Arabic.
8	hásht berík, athwatur	mánz, *kan-zūn-te-yin-dir*	*bŏd-tsór*	áṭhan	*lámman-aur-trewáí*	karhá	hashátt	atélu	át	aṭṭh	aṭṭhe	aṭṭha	ashṭan	hasht	samání.
9	*athwatir-ékam*	wán, *bin-kam-zūn*	.....	nawan	*lámman-aur-airan*	korág	noátt, noík	narélu	nau	naun, náún	nawá, na-má, nam-má	nava	navan	nuh	tisa'.
10	*za-atiláq*	kirr, zūn	*bŏd-atti-láng*	dahan	*do-lámman*	águr	deík	daséla	dah	das, dhaṛí	dah, dahám	dasa	daśan	dah	'ashr.
15	*tre-ata-laq*	dód-zūn	.....	panda-han	.....	.....	.....	parélu	.....	pandrá	pandrá	paṇṇara-ha	pancha-daśan	panz-dah	
20	*tsór-ata-laq*	phút, *ha-zūn*	.....	wohan	sútri	sút	bisík	lí, lísa	wú, wih	bíh, víh	bís	vísa	vinśati	bíst	
25	*páu-dúkh*	*dái-zūn, ha-zūn-te atilaq, hazūn-te-kan-zūn*	.....	panso-han	.....	.....	.....	.....	.....	panjí, pachí	pachís	.....	pancha-vinśati	...	
50	*oḍh-dúkh*	*rúm-do, kan-wát*	.....	pantsa-hin	*tál sér*	.....	.....	.....	pánsa	panjáh	pachás	paṇṇása	pancháśat	panjáh	
100	dúkh	yíkam, wát	.....	hát	*sér*	bhidá	sadík	ner, *pándo-lísa*	hátt	sai, saikṛá sau.	sai, sal, sat, saikṛá	saa	sáta	sad	Not in ordinary use in India.

* In the Panjábí and Hindí Dialects columns, words are included other than cardinal numbers, because what may be now an ordinal or multiplicative form in them, may have a common derivation with the cardinals of the trade dialects. Transliterations have been made uniform for purposes of comparison.

TABLE II.—*Multiplicatives.*

Numerals.	Naqqáshí.	Zargarí Kashmírí.	Tarkhán, etc. Kashmírí.	Shálsáz Kashmírí.	Zargarí Panjábí.	Panjábí.*	Hindí dialects.*	Prákrit.	Sanskrit.
¼	paú	.....	.....	pan, pannas	.....	paú, chuthái	páo, chauthái	.....	páda.
½	oḍh	kan, dandan	.....	.....	tál	addh, addhá	ádh, ádhá	.....	arddha.
1½	.....	dod	.....	doḍ	do	ḍeṛh	ḍeṛh, ḍúṛhá, ḍeoṛhá	divaḍḍhe	dwiarddha.
2	za	ha	böd	don	.....	ḍúní	dúná	.....	dwis.
2½	.....	daí	.....	dayan	.....	ḍáiá, ḍhái	aṛhái, aḍhái	.....	(?)trayárddha†
3	tre	.....	.....	tini	.....	tráún	tí, tíná	.....	tris.
4	teor	.....	.....	san	.....	chaukká	chaukká	.....	chatus.
10	do	.....	.....	dahan	.....	ḍáhá, daháká, daháhá	dahám	.....	.....

* The same note applies as to the former table.

† [The Sanskrit equivalent is *ardha-tritiya*, Prákrit *aḍḍháiá*, see Dr. Hoernle's Gauḍian Grammar, p. 270. ED.]

Words which are connected or are Prákrit and Sanskrit derivatives are as follows :—

Cardinals.

1. ék-am, ák, ak-ára, ikk, ek, ek-ka, ek-átt.
2. do-n, zü, zi-h, (*Dard* ju), do, du-j, dwi, do-att, to-r.
   (ii) ha-ndish, sa-nní, saú-nán, (?) zü.
   (iii.) dwi, (?) wí-ng.
3. ti-n, tre-wáí, tre, ti-nn, trai, tí, te-g, tí-n, ti-ṇṇí, tri.
4. tsau-nter, kárr, tsor, chr-átt, chau-g, ser, chár, chár-i, chau, chattári, chatur.
   (ii) sa-n, (?) chau.
   (iii) ser, (?) air-an, ahir-in.
5. phant-ian, pán-do, (?) pá-lo, pants, panj, panj-e, panj-átt, pa*n*ch-a, pa*n*ch-an.
6. shá-nk, kha, (?) shu-pp, shi-n, che-lí, che-blú, (?) pu-chhá-rí, che, chhe, chhah, chha, shash, shesh-átt.
7. sáth-an, sát, satt, satt-e, sat-élu, sat, satta, sapt-an.
8. (?) hásht-(berík), ath-wotur, ath-watir, hash-átt, áṭh-an, át, aṭṭh, aṭṭh-e, at-élu, aṭṭha, ashṭ-an.
9. naw-an, nau, náú-*n*, naw-á, no-átt, no-ík, nava, nav-an, na-rélu.
10. zü-n, dah-an, dah, das, de-ík, das-élu, das-a, daś-an.
15. pan-dahan, pan-drá, paṇ-ṇaraha, pa*n*cha-dasan, par-élu.
20. woh-an, wú, bíh, víh, bís, bis-ík, vís-a, vi*n*ś-ati, (?) lí, lí-sa.
   (ii) súṭ-ri, súṭ, (ví) saí, (vi*n*) śati.
25. pans-oh-an, panj-í, pach-í, pach-vís, pa*n*cha-vi*n*śati.
50. pants-ahin, pán-sa, panj-áh, pach-ás, paṇ-ṇása, pa*n*chá-śat.
100. (?) wát, hát, hátt, sai, sau, sal, sat, sad-ík, saa, śata.
   (ii) (?) dú-kh, (*Dard* dosh-um), sad-ík, sai-kṛá, (?) yík-am.

Multiplicatives.

¼ paú, pá-n, pa-n-as, pan, páo, pá-da.
½ oḍh, addh, ádh, arddha.
1½ dod, doḍ, do, ḍeṛh, ḍeoṛha, divaddhe, dwiarddha.
2 (?) za, do-n, dú-ní, dú-ná, dvis.
   (ii) za, (?) ha.
2½ daí, da-yan, ḍá-iá, a-ṛhá-í, (?) tra-yárddha.
3 tre, ti-ní, trá-ú*n*, tí, tí-ná, trís.
4 tsór, chau-ká, chatus.
   (ii) sa-n, chau-ká.
10 do, dah-an, dáh-á, dah-ám.

Words apparently untraceable and worthy of further examination are —

Cardinals.

1 bi-n; habb; nal, nal-as; má-nú. But with bin compare the Dard hin.
3 yé-ndir, ya-ndir, yi-ndir; wur-ún; ek-wáí; se-átt.
5 rúm.
7 phál; paint, haf-átt. (paint is used by the Dehli daláls or touts).
8 manz; karhá.
9 (?) wán; kor-ág (?) for kam-águr, one less ten).
10 kírr, águr.
100 ner.

Multiplicatives.

½ tál; kan, (but kam = kan, for *once*, in Hindí).
2 böd.

I have given Persian and Arabic numerals as usually used (when employed at all) in India, as of course slang and trade dialects would be quite impartial in their adaptations and would take in *any* word that would suit. The Persian numerals are so close to the Sanskṛit and Indian that their influence may be set aside, except perhaps in two instances in the Changar Dialect, *viz.*:—

3 se-átt.
7 haf-átt.

Arabic influence *may* be visible in—

2 ha-ndish, (Naqqáshí and Zargarí Kashmírí); sa-nní and sau-nán (Zargarí Panjábí and Hindústání).*
9 kor-ág (Zargarí Hindústání).
10 águr (Zargarí Hindústání).

Some words, as sút-ri and sút for 20 in Zargarí Panjábí and Hindústání, seem to be relics of the last portion of the old Sanskrit and Prákrit compounds vi*n*-śati and ví-sa, just as wo-h-an, wú, bi-h, ví-h, bí-s, would be relics chiefly of the first portion only. Perhaps wán, 9, Zargarí Kashmírí is the same unless it be simply nau reversed.†

Guided by the *ík* terminations for *tens* in the so-called Khurásání Magaddí we may perhaps see something of the sort in yík-am, 100, Zargarí Kashmírí; thus, śata, sad-ík, sai-kṛá, dú-kh, yík-am.

Although the above identifications seem satisfactory on the whole, and the words unaccounted for are few, still the terminations of the words remain in an unsatisfactory state.

* Swán is used by the Dehli daláls or touts for 2, a corruption there apparently of the proper name Sohan.

† Wan is the word used by the Dehli daláls. Fallon in his *New Hindústání Dictionary* gives a quantity of these numerals as those of brokers, dealers, etc. They are scattered about the pages and very difficult to collect, but it would be probably worth while doing so and examining them.

It is not difficult to see the relics of the old Sanskrit *an* in the following:*

1 ek-am, (?) bi-n.
2 wí-ng, dó-n, (?) sa-nni, (?) sau-nán.
3 wur-ún, tri-n, (?) te-g.
4 sa-n, air-an, ahir-in, (?) chau-g, (?) chau-ga.
5 phanti-an.
6 shá-nk, shi-n.
7 sáth-an.
8 áṭh-an.
9 (?) wá-n, naw-an.
10 zü-n, dah-an.
15 pandah-an.
20 woh-an.
25 pansoh-an.
50 pantsah-in.
¼ pa-n.
½ (?) ka-n.
2 do-n.
2½ day-an.
4 sa-n.
10 dah-an.

We may perhaps see śati in lí-sa, 20, Changarí, and the *átt* termination in the Khurásání *may* be explained to be háth, hand.

But the majority of the terminations seem to be untraceable, especially the remarkable ones of the Naqqáshí, *viz.*, ha-ndish, yé-ndir, tsauntar, ath-wotar, ath-watir. Ya-ndir, yi-ndir occur, too, in the Zargarí Kashmírí. Taking *wotar* and *watir* into consideration and dropping the *n* of the others as phonetic, we get dish, dir, ter, wotar, watir for the true terminations. These are comparable with the idiomatic *utar* and *otar* of Hindí.† With handish may be compared the Tibetan nish, 2.

In Naqqáshí occurs hásht-berík for 8, with which may be compared the Khurásání numerals.

Besides the above we have, and all apparently untraceable terminations,

* [This is very improbable. *Dón 2, trin 3* correspond to the Prákrit *doṇi, tiṇṇi* (Skr. *triṇi*) with the neut. plur. termination *ni*.—The *wotar, watir* is the Skr. *uttara*; thus *athwatir-ékam* 9 would be Skr. *ashṭottaraikam* "one added to eight," whence by a not uncommon mistake *athwatir* ('added to eight,') is taken to mean 'eight'! Similarly in the case of *tsauntar*. Ed.]

† Kellogg § 184 (*a*), p. 166. Platt, 51, footnote.

1 nal-as, ak-ára.	8 at-élu.
2 tó-r, to-ra, to-rat.	9 no-ík, na-rélu.
3 tre-wái, ek-wái.	10 de-ík, das-élu.
5 pá-lo, pán-do.	15 par-élu.
6 shu-pp, che-lí, puchhár-rí, che-blu.	20 bis-ík.
	100 sad-ík.
7 sat-élu.	¼ pa-n-as.

The *pu* in pu-chhá-rí, 6, perhaps purposely inserted for secrecy, is a curious and notable prefix. It occurs again in the Zargarí Hindústání as pu-chhá-rihá, half a pice, but apparently really meaning one-sixth.

The compound numerals show how clearly these dialects borrow from the surrounding idioms for their expressions. The conjunction in the following is pure Panjábí, meaning *and*.

6 kanzün-*te*-bin.
7 kanzün-*te*-handish.
8 kanzün-*te*-yindir.
25 hazün-*te*-atilaq, hazün-*te*-kanzün.

In the following the same conjunction is pure Hindí.

7 lámman-*aur*-sanní.
8 lámman-*aur*-trewái.
9 lámman-*aur*-airan.

So, too, we have pure Hindí.

9 bin-*kam*-zün, one *less* ten.

Lastly, the principles on which the following compounds are constructed will be at once recognized as ordinarily current in the modern Aryan languages of India.

15 dód-zün, 1½ times ten.
25 paú-dúkh, ¼ hundred; daí-zün, 2½ times ten.
50 oḍh-dúkh, half hundred; kan-wát, half hundred, tál-sér, half hundred.

There remains but one word to notice, *dandan*, half, Zargarí Panjábí, which may be an inversion of ádh, a common trick in the slang of traders and bad characters.

I therefore think that the numerals raise a strong presumption in favour of considering these dialects to be real dialects and relics of a bygone speech, or form, of speech as opposed to mere slang.

Let us now turn to the other words given by Dr. Leitner and compare them. Unfortunately they are not numerous and complete enough to satisfactorily upset or confirm the conclusions the study of the numerals would lead us to. But an examination of them is very encouraging, as the majority succumb under comparison with existing idioms and languages, and prove themselves to be either relics or adaptations of

known words. Moreover the same form of words, whether derivable from Prákrit, Sanskrit, Persian or surrounding idioms or not, is found to exist in the dialect of traders widely separated geographically. Thus, the words for "eye," clearly traceable to existing words, are the same practically among the Naqqásh, Panjábí Zargars, Kashmírí carpenters, &c., and the Changars. In the Kashmírí and Hindústání Zargarí no word is available, and in the so-called Khurásání it is *núr*, a clear borrowing from Persian. The coincidence and similarity of the words in the Changarí, Naqqáshí and Zargarí Panjábí dialects can hardly be accidental. It points to a common derivation from some old and forgotten forms of the existing recognized dialectic words.

The following table contains the comparison of 55 words and expressions in all the above dialects.

(*See Table III, next page.*)

As in the case of the numerals let us commence sifting this table by eliminating from it categorically all borrowings from surrounding idioms. All such are printed in italics in the table. The following words are derivable more or less directly from words in actual use in ancient or modern languages or dialects.

General nouns.

master; lánká is Kashmírí: for bák, teg, tog, tagís see "man."

wood; hímá, is Persian, hezam: lichkrí = lakṛí, Hindí.

house, shop; pánzir is (?) Pers., pázer, in possession: liṛ, is Kashmírí: hattí = Panj. haṭṭi, a shop: pír-khána is Pers., a holy man's house and is here ordinary slang: nád = naḍ, Panj. Hills, a riverside cave; it may also be thán, place, reversed. See Beames' note to Elliot, i, 161.

paint, oil; tël = Hindí, tel, oil: kiób = Panj. ghio = Kashm. ghiáu, *ghí:* kajálná, Dr. Leitner says this is for ka + jalná, to burn, but may it not be for kájal, lamp-black used as paint for the eyebrows?

word; naí is Panj. Hills for "word."

salt, sweet; kaurmá, salt, = Panj. kauṛá, bitter: mitmí, sweet, = Panj. miṭṭhá; for the Panj. terminations *má, mí*, see Sirdár Gurdiál Singh's (C. S.) remarks in Dr. Leitner's *Sketch of the Changars*, 1880, pp. 19—20.

tea; zal is "water," jal: chik, sakhí, = (?) chá (which is of (?) Persian origin) + khí or ká, or perhaps they come from Panj. chakhṇá, to taste.

tobacco; bhasúká = Hindí and Panj., a smoke, a dust: phámphí = Hindí and Panj. bháph, a vapour.

huqqa; panyúl-doch, doch is Panj. Hills for dechkí, the ordinary hubble-bubble; this inclines me to connect panyúl with píná or páni.

Table III.—*General Nouns.**

English.	Naqqáshí.	Zargarí Kashmírí.	Zargarí Panjábí.	Tarkhán, etc., Kashmírí.	Zargarí Hindústání.	Khurásání Magaddí.	Changarí.
master	*lánká*	*bák* (= man)	.....	*teg, tog, tagís* (= also great)	math	.....	.....
wood	*hímá*	.....	.....	kesur	.....	.....	*lichkrí.*
house, shop	*pánzir, lir*	nelahan (shop)	nel; *hattí, pírkhána* (shop)	.....	.....	dīle	*nád*
paint, oil	*tél*	.....	.....	*kíób* (oil & *ghí*)	nánwikáhá	.....	*kajálná.*
word	*naí*	.....	.....	.....	.....	.....	.....
salt, sugar	tokkún, tokuwún	.....	.....	.....	ráresiká (salt)	.....	*kaurmá* (salt) *mitmí* (sweet)
tea	*zal* (? water)	*chík*	.....	*sakhí*	.....	.....	.....
tobacco	panyúl	.....	.....	panyúl; panyil (snuff)	*bhasúká, phámphí*	.....	.....
huqqa	panyúl-*dóch*	.....	.....	.....	.....	.....	.....
paper	*rikkín*	.....	.....	.....	*gaukhá*	.....	.....
mouth	*múr*	.....	*búa*	*múch* (face)	*bhús*	yakák	kumbr (?), bratírí.
eye	*zú-túún, zi-tiní,* (*zú* = two)	.....	*teg*	*zu-tingí, tinge*	.....	*núr*	*pa-tirní, pa-chirní.*
qalamdán	zákkir	.....	.....	.....	.....	.....	.....
rice	gúnne, rád	ráng	.....	rad	.....	parást	*kúndr.*

TABLE III.—*General Nouns.*—(Continued.)

English.	Naqqáshí.	Zargarí Kashmírí.	Zargarí Panjábí.	Tarkhán, etc., Kashmírí.	Zargarí Hindústání.	Khurásání Magaddí.	Changarí.
bread	*bérets*	atich, *nang*	*neg, nigle*	.....	tápne	yarthít	tapí.
disease	*máshildd*	.....	.....	.....	.....	.....	.....
physician	*nabzuwól*	.....	.....	.....	.....	.....	.....
man	dohun, dúh	*bák, bdke*	gelá	*tog, tagis*	.....	*mák*	gáun.
woman	*soin*, kollai	*kinn*	sían	*wáñy, wán*	*berot*	nadán	gírání.
mother	bajúr	zõhõ *kinn* (great woman)	.....	bájú	*thenthí* (old)	*mánk*	*járí* (also aunt)
father	*dóddur* (old)	.....	*doddúr* (old)	lámo	*tháwáná* (old man) *thyáthá* (father)	*bánk*, abelák (great)	*járá* (also uncle) *tsúdá* (old).
daughter	putsakut, putskät	.....	.....	.....	.....	dumtáz, *dilkhách*	diblí
son	*pútse*	.....	.....	.....	*chúnwá*	*jáde, putr*	diblá.
thief	*poshumut, wúsagun*	*chokendás*	.....	wútse	*kotú ; kodí* (theft)	gináu	*kóder.*
night	*krishor*	.....	.....	.....	.....	.....	*nela, channan.*
day	*zád zár*	.....	.....	*zarín wát*	.....	.....	*temkaná.*
stomach	*gúnná*	.....	.....	.....	nadikh	.....	*didh, deddo.*
jewelry	*dijphúl*	*dorá, dél*	.....	*dájphúl*	.....	.....	.....

TABLE III.—*General Nouns.*—(Concluded.)

English.	Naqqáshí.	Zargarí Kashmírí.	Zargarí Panjábí.	Tarkhán, etc., Kashmírí.	Zargarí Hindústání.	Khurásání Magaddí.	Changarí.
hair	kiōpush	.....	.....	kane-ke-shupp	.....	.....	*wál.*
hand	hatlaq	lámmá	lámman	tseñ-horr	*hathan*	khátt, *át*	.....
colour	riūg	.....	.....	.....	.....	.....	.....
water	*zal*	.....	*áb, jal*	*zál*	nájná	mayáo	*nír.*
			Verbs.				
be silent	*múnn, múṇ*	.....	.....	.....	*nítha hohú*	.....	.....
to see	natsún	.....	.....	.....	lau *karat hai* (he sees)	.....	.....
see	natso	.....	*tigdá* (he sees)	.....	láo *karan* (see)	.....	*hok lé.*
to hear	wendún	.....	.....	.....	.....	.....	.....
hear	wendo, wendús	.....	.....	.....	.....	*núr bedá*	*sung lo.*
to die, be ill	*máshiran*	.....	.....	.....	.....	.....	.....
to say, ask	*párún*	.....	.....	*páriús* (ask)	dámisáhu (speak)	.....	.....
to be	*záddún*	.....	.....	ches, chu, (is)	.....	obam (I am), obe (is)	.....
to go	*sandún ; sand* (go)	rusún (to go) : *torús* (go) : *toreo* (went)	*búrt, bút, wát,* (go)	sír (go), *wátu*	.....	*bikím,* (go)	*jáo kur* (go).

TABLE III.—*Verbs.*—(Concluded.)

English.	Naqqáshí.	Zargarí Kashmírí.	Zargarí Panjábí.	Tarkhán, etc., Kashmírí.	Zargarí Hindústání.	Khurásání Magaddí.	Changarí.
to take away	sorwún	.....	.....	sarewiú (imp.)	.....	.....	seír *jáo* (imp.).
to sing	*bombárún*	.....	.....	*bomburún*	*biárho* (sing)	.....	.....
to fall	*hárún*	.....	.....	.....	.....	.....	.....
to come	walún	aspeo (cause)	búte á (come)	zireo (came)	.....	*buars* (come)	*kur* kunár (come).
			Coins.				
rupee	gásh, gás	*mánká*, bin	ággu	gash	*parikaliá*, *bajná*	.....	bereá.
silver	.....	bün,(mar,money)	ruggí	.....	.....	peli, *noqrá*	.....
pice	láng	bŏt	láná	láng	sariya (1 pice)	.....	*máslá*.
copper	.....	rúh	*subh*	.....	.....	.....	.....
			Adjectives.				
sweet	baguwún, tokuwún	.....	.....	.....	.....	.....	.....
little, cheap	*kís*	*kín*, tćm ; zabár, (cheap)	hokí (little, also dear),	*daká*, wartúts, *miáne* (also half)	bhagat (less)	*kilel*, *qalíl*, kiánurs	licherá.
much, dear	grúts	*bór* (big), zŏhŏ, much	uggí (also cheap & see rupee)	grús	beárás (more)	labánk, ubelek, (see father), geni	jerá.
good	sod	tsásle, *chin*, (also cheap)	*sánchá*	ai	.....	dakh, núto, butúp	do.
bad	*náz*	.....	.....	*náz*	*káusí*	wartúp	.....
ill	*mashilád*	.....	.....	.....	.....	*nakhús*	.....

áyá merá Katoch,
píne baiṭhá hathen doch. *Kángrá Proverb.*

my friend the Katoch came and sat down to smoke with the hubble-bubble in his hands, *i. e.*, did the gentleman and was idle. Said of an idle useless person. The Katoch Rájpúts were the old ruling class in Kángrá.

paper; rikkín = Panj. Hills, likhín, paper: gaukhá = ghazká = kághaz; Beames, footnote to Elliot, i, 161.

mouth; face; múr = Hindí (Jhánsí) head: múch = muchh = mukh, the face; bús, bhús from bhús karná, Hindi, to masticate.

eye; zü-tüün, zi-tiní, teg, zu-tingí, tinge, pa-tirní, pa-chirní and tig-dá, he sees = Panj. Hills ṭiḍḍ, tiṇḍ, the eyeball and takṇá, to see; zü, zi, zu (and (?) pa) = Kashm. zü, zih, two; thus zütüün, etc., would be the *two* eyeballs and so on, and pa-*tir*-ní (*ṭiḍḍ*) would also be the *two* eyes;

tere ṭiḍḍ jalen! *Kángrá.*

is a common abuse corresponding exactly to our own vulgar expression "blast your eyes."

núr = Pers. light.

qalamdán; zákkir = (as a guess) zákir from Arabic zikar.

rice; kóndr = Panj. kodrá, corn.

bread; bérets = barach = charb (or chab) reversed, which in the Panj. Hills, means any kind of food for a journey; chab is properly any parched grain for food: nang, neg, nígle = Panj. nigalná to swallow.

disease; máshilád, máshiran, to die, mashilád, ill, = machilá, a malingerer; machal jáṇá is a Panj. idiom for to die, explained as (but?) ma + chalṇá, to go away.

physician; nabzuwól = nabz-wálá, Panj. and Hindí.

man; bák, báke, mák and bák, master, bánk, father = bánká, Panj. a fine man: tog is gut or got (*but*), Panj. Hills, reversed, a body; thus,

main ne janaure dí gut jándí dikhí,
I saw an (animal's body) animal going along.
main jándí dikhí gut,
jáne dhí thí, jáne put. *Kángrá Proverb.*

I saw a person going along, who knows whether male or female, *i. e.*, I saw some one in the distance, but could not distinguish who it was.

teg and tagís would come from tog.

woman; woin, wáñy, wán = Panj., bánj and Kash., wónj, a barren woman: kinn is (?) nik-í reversed, Panj., a small woman: sían = (?) hían, Panj. Hills, a brave woman; hiá, courage; hiau, brave man; híau, brave woman: beroí = (?) birví, (fem. of bir, brother,) Hindí, a female friend, sister.

mother; thenthí, mánk, járí, see "father."

father, old; dóddur, doddúr = dádá, grandfather, as also do probably thyáthá and thenthí (mother): tháwáná = Hindí (Jhánsí) dáú, old: járá, járí = jad, jadá, Pers. (from Arab.) a grandfather, grandmother; tsúdá, old, = súdá, old man, Panj. from (?) Pers. súdan, to rub away: mánk, bánk = (?) má-báp.

daughter; dilkhách = Pers. dilkash, a darling.

son; putse, putr = putr: chúnwá is Panj., a darling boy: jáde = zádá, Pers.: putsakut, daughter may be for "small or inferior son"; *cf.* Kash. lakut, little.

thief; poshumut = pushmattá, Panj., a hider, thief: wusagun = subsagun *lit.*, a good omen, but used for a thief as a euphemism.

Aj uske ghar men subsagun gayá, aur usko nihál kar diá.

To-day a thief (*lit.*, good omen) came to his house and robbed everything (*lit.* made him very rich).

Subsagun áyá thá dar
Dhan rakhne ko kuchh thá na ghar. *Hindí Proverb.*

The thief (good omen) came to the door, and there was no need of keeping wealth in the house.

Chokendáz = (?) surákh-andáz, Pers., house-breaker: koṭú is Panj. a house-scaler: kodí, theft, and koder = Panj. khodí, a house-breaker.

night; krisor and nelá would mean dark: channan = Kash. chungun, to lie down; the Tibetan word for night is also nichannan.

day; zarín-wát, zád, zár = zarrín, golden, bright, also (poet.) the sun, Pers.; zarín wát = (?) zarrín wáqt, and hence zád and zár: temkaná is Panj., tamkaṇá and damkaṇá, to shine.

stomach; didh, deddo are Panj., ḍhiḍ; nadikh = doubtfully Panj. nadikh hoṇá, to have a painless or easy labour; nadikh 'aurat, a fruitful woman or a woman descended from a fruitful stock.

jewelry; dijphúl, dájphúl = Panj. and Hind. dáj (= dahej = dahez) + phúl, the dower jewels: dorá, dell (*cf.* mera = mora, teg = tog, doch = dechkí) = Panj. Hills, the marriage hair ornament worn for six months after marriage = Panj. prándá.

hair; wál is Hindí bál and Panj. wál.

hand; hathná, át = háth.

water; áb; jal, zal, zál and nír speak for themselves.

Verbs.

be silent; múnn, muṇ = Hindí munní honá, to be dumb: nithe hohú = Urdú idiom níyat sa raho, be quiet.

to see, see; tigdá, see "eye": hok le = (?) dekh le, a mere corruption; *cf.* doch = dechkí, merá = morá, etc.

to hear, hear; núr bedá = (?) Pers. núr bidár, *look* here, listen: sung lo is Hindí and Panj. sun lo.

to die, be ill; máshiran, see "disease."

to say, ask; párún, páriús = (?) ba-purs, Pers. ask!

to be; záddún is Pers. zádan, to be born.

to go, go; sandún, sand is Panj. hanḍṇá: torús, toreo are Panj. ṭurṇá: wát, wátú = Panj. Hills wáṭṇá, wuṭṇá, to go, (*cf.* báṭ, a road); wuṭ wuṭ! go along, come along! is vulgar Panjábí and hence probably búṭ and (?) búrt in Pánjabí Zargarí: bikím = (?) Pers. bi-kam, grow less, diminish, vanish!: sír (*cf.* seir jáo, take away) = (?) Urdú, sair karná, to make a journey: jáo kur is Hindí go!

to take away; sorwún, sarewiú may be for chhoṛná and chhaḍṇá, Panj. to let go: seir jáo see "go (sír)."

to sing; bomburún = buṛṇá, Panj. to bubble: biárho = biár, a puff, rush of wind, sound of wind, Hind.

to fall; hárún = Panj. harṇá, (to take away, lose and) to fall (of water).

to come, come; buars = (?) bi-ras, Pers,, arrive, come! walún, *cf.* Kash., walyúr, come here!

Coins.

rupee; mánká = mánik, Hind, (maṇakya Sansk.), a precious stone; parikaliá is from (?) Hind. parkná, to test a coin: bajná is Hind. to test a coin.

silver; noqrá is Arabic in common use.

pice; máslá is Hind. a small pice.

copper; subh = sobhí, Hind. alloyed silver, base silver.

Adjectives.

little, cheap; kís = kuchh, kichh, Panj. and Hindí: kin = nik reversed Panj., very little: daká is Arabic daqíqá, a little, in common use: miáne is Hindí half; qalíl, kilel are pure Arabic, a little.

much, dear; bór is Hindí baṛá, Kash., bod, Panj. waḍá.*

good; sod is Arab. sa'ad, good: sánchá is sáchá Panj. true: míto = míthá, sweet: chín = Kash. jwán.

bad, ill; nakhús = Arab. náqis, bad, whence (?) názz or náz: kánsí = kasná, Hind., to be made bad, *i. e.*, by putting lime on to brass or copper vessels so as to make them poisonous: mashilád see "disease."

The major portion of the words are thus disposed of and shown to be really dialectic and not slang inventions. A further examination of the underived words will show that many of them are evidently connected

* To be noted here with regard to grúts, grús, much, dear; these are the Kashmírí drúg, dear, surúg, cheap, reversed.

with each other, and that it is only a question of a minuter knowledge of idioms and languages than I possess to trace them to their origins. Thus,

General Nouns.

house, shop : nelahan, nel, dile.
tobacco, snuff : panyúl, panyil.
rice : rad, rád, ráng, pa-rást.
bread : a-tich, yar-thit, táp-na, tap-í.
man ; woman : gelá, gáun, giráni.
mother : bajúr, bájú.
hair : kiöpush, kanekeshup (if shup = push).
hand : lámná, lamman.

Verbs.

to go ; take away : sír ; sorw-ún, sarew-iú, seir-jáo.

Coins.

rupee : gásh, gás, gash.
rupee, silver : bin, bün ; ággu, ruggí ; berea, pelí.
pice : láng, láná.

Adjectives.

much : grúts, grús.
little ; great : licherá ; jerá.
good ; bad : bu-túp ; war-túp : (little) war-túts.

These leave but a small residue of isolated untraced words, which I give here so as to have them in one view for purposes of future comparison by myself or others, should opportunity arise.

General Nouns.

wood : kesur.
oil : nánwikáhá.
salt (also sweet, sugar) : tokkún, tokuwún.
sweet : baguwún.
mouth : yakák, kumbr, (?) bratirí.
qalamdán : zákkir, (but see under traced words).
rice : gúnne, (unless meant for sugarcane).
man : dohun, (dúh).
woman : kollai, nadáu, sían (but see under traced words).
father : láme.
daughter : diblí, putsakut (putskät), dumtáz. If puts = puchh, a tail, then dumtáz is a remarkable coincidence.
son : diblá.
thief : wútse, gináu.
stomach : gúnná (*cf.* "rice" above), nadikh, but see under traced words.
hand : hatlaq, tseñ-hor, khát.

colour : riúg (unless a corruption of rang).
water : nájná, mayáo.

Verbs.

to see : nats-ún : láo (karan).
to hear : wend-ún.
to say, ask : dámis-áhú.
(he) is : ches, chú : (I) was, ob-um : (he) is, ob-e.
to go : rus-ún.
to come : wal-ún : búte (á) : (kur) kunár : (came) asp-eo, zir-eo.

Coins.

pice : böt, sariyá (? means one-third).
copper : rúh.

Adjectives.

little, cheap : tem, hokí, bhagat, kiámus.
cheap : zabár.
much : zöhö, beárás, ubelák.
good : tsásle, chin, ai, dakh, do.

I tried the untraced words with several Kashmíris, and residents of the Himálayan Districts and they told me they were Ladákí. I then searched in Cunningham's *Ladak*, 1854, who says, p. 397, that the language of Ladák is Tibetan, and at pp. 398—419 he gives a long comparative table of the following "Alpine Dialects" or Languages ; Dard, (3 dialects) Pashto, Kashmirí, Sanskṛit, Hindí, Panjábí, Gaddí (Káṅgrá) Kulluhí (Kullú) Gaṛhwálí and Tibetan (3 dialects). The help thus obtained was next to none. Thus,

master, man : teg, tog, tagis, might perhaps be Tibetan, tek, teg, good, (see my tables).

mother : bajúr, bájú, may be connected with Gaddí and Kulluhí, iji, and Gaṛhwálí, bhaí.

night : channan is very like Tibetan nichanno, but see the word above.

I am ; he is : obum ; obe are comparable with the Dard bé, to be ; I am, ja bá ; thou art, um bá ; he is, ai bá.

The inferences then to draw from this examination would seem to be, that, though the special dialects of the Indian traders may now be looked upon as slang, and though they undoubtedly contain slang distortions and perversions of common words purposely made, the majority of their words are dialectic and *bonâ fide* represent either real existing words, or older, and in some cases obsolete, forms of them, and that they contain these words in sufficient quantities to render it worth while to study them as dialects.

Unfortunately, the materials for the dialect, which I have been led to examine are the most meagre of all those given by Dr. Leitner.

Much fuller materials for examination exist from his and Elliot's researches into the dialects of the Changars, the Zargars of the Panjáb, Kashmír and Hindústán proper, and of the doubtful Khurásaní Magadds, including sentences to illustrate grammar. It would be of value to see if the conclusions here arrived at would be supported or the reverse from an examination of them. But in any case the material at hand is much scantier than it might be and doubtless research would elicit many new forms from the dialects already represented, and beginnings might be made with some as yet untouched apparently by any enquirer, *e. g.*, those of the Delhi *Daláls* (brokers), the *Kaláls* (generally distillers and liquor-sellers) and the Lucknow *Afiúnchís* (opium-takers). As regards the criminal classes and tribes, however, Dr. Leitner has shown in his "*Detailed Analysis of 'Abdu'l-Ghafúr's Dictionary*, 1880, that it is almost useless to look among them for philological facts.

In conclusion I may be permitted to remark that if Dr. Leitner's hope, (*Linguistic Fragments*, p. iii.), that the Trade Dialects will be found to preserve an ancient language, is to become a reality, the enquiry must be taken up by more than one person. The range of knowledge required is too wide, and the investigations necessary too minute and searching to admit of one head solving the problems presented, in a satisfactory manner.

Tiomberombi. A Nicobar tale.—By F. A. DE ROEPSTORFF, *late offig. 2nd Assist. Supdt., Port Blair, Nicobars, Associate A. S. B.*

Both racial characteristics and the historical traditions of a people are commonly found embedded in their religious rites and in their popular tales. This is especially true in the case of uncivilized tribes. Whilst pursuing my studies in the Nicobar language with the object of reducing it to writing I have made a point therefore of noting down the characteristic religious usages of the Nicobarese, and also of chronicling the tales in vogue amongst them which possibly embody historical events of a forgotten past. With regard to their sacred rites I have ready for the press a Statement of "The ceremonies and customs at death, and at mourning for the dead, of the Nicobarese people" taken fresh from the lips of the devotees themselves. These ceremonies yield up their meaning and significance with sufficient clearness and precision; but the case is very different with regard to any historical references and traditions which may be hidden away in the popular tales of the Nicobarese people. For a most singular custom prevails amongst them which one would suppose must effectually hinder the "making of history" or at any rate

the transmission of historical narrative. By a strict rule which has all the sanction of Nicobar superstition, no man's name may be mentioned after his death! To such a length is this carried that when, as very frequently happens, the man rejoiced in the name of "Fowl," "Hat," "Fire," "Road" &c., in its Nicobarese equivalent, the use of these words is carefully eschewed for the future, not only as being the personal designation of the deceased, but even as the names of the common things they represent; the words die out of the language, and either new vocables are coined to express the thing intended, or a substitute for the disused word is found in other Nicobarese dialects or in some foreign tongue. This extraordinary custom not only adds an element of instability to the language, but destroys the continuity of political life, and renders the record of past events precarious and vague if not impossible. We must not therefore expect to glean much from these tales as to the past history of the people. Still they are, as a rule, worth preserving, for they exhibit traces of religious ideas which prevailed in former times, of bitter conflicts, and of Nicobar humour. The most popular of these tales I here subjoin; and I hope to prepare others hereafter.

The Nicobar text, reproduced as literally as possible in the English translation in the parallel column, consists of short abrupt sentences, devoid of any poetic flight whatever. The language of this people is naturally, one had almost said *necessarily*, abrupt, their teeth being so thickly coated over with betel and lime as to keep the lips thrust wide open, whilst quids of the same generally occupy their mouths. A fluent utterance under these circumstances would be physically difficult and a slow speech broken into short sentences is the inevitable result. To enter into the spirit of the narrative it is necessary to picture to oneself the *raconteur*, usually an old man, his jaws ever and anon at work chewing the indispensible quid of pan, betel, and lime. His auditors, generally the youthful members of the community, are grouped around him. Having refreshed his memory with copious draughts of toddy he commences his story. It has often been heard before, and as the disjointed sentences are uttered with slow deliberation a running commentary is maintained by the audience, the young people, anxious to show that they know what is coming, shouting out the cue of the part about to be related. The jerky character of the diction, therefore, as it appears in the English translation faithfully reproduces the condition of the Nicobarese text with as little sacrifice as possible of the original colouring, the interjected observations of the elders, and the precocious promptings of the juvenile listeners being left to the imagination of the reader to fill in, if he would have a good idea of the narration as it flourishes in the homesteads of the people—the pages of a book cannot adequately convey it.

It is possible that the tale of Tiomberombi may be of foreign, perhaps of Malay, origin. If so it must have been introduced into these islands generations ago, for it now abounds with the peculiarities which characterise the Nicobarese race, breathes their spirit and has been wholly adopted by them as their own, and never fails to afford them delight. The plot of the tale is simple enough. The two points of interest in it are the magical powers exercised by the hero, and the introduction of animals talking. The supernatural is closely interwoven with the lives of these people. The disembodied spirits of the dead surround them, and in their endeavours to return to the world, would effect a lodgment in the bodies of the living, hence, according to the native superstition, the cause of sickness and sometimes of death. To fight, control, exorcise these too familiar and obnoxious spirits the Manlōěnĕs exist. These, who are a sort of combination of the doctor and the juggler, are on speaking terms with the spirits. They have to go through an initiation which is only complete when they have been in spirit-land, seen, and talked with them. They are supposed to possess the faculty of detecting the presence of these invisible spirits, of seeing them, as well as of vanquishing them. It is to be remarked that Tiomberombi is no Manlōěnĕ. Not only does he acquire by the gift of the looking-glass no inherent power over the spirit residing in it, for when the glass is lost he is utterly helpless; but when the *peit* (snake) gives it to him, he finds himself unable to manage the spirit of it, and returns with the glass in fear of his life. On the contrary, the spirit of the mirror is in the power of the mighty snake: he is its true master, and it is only through him that our hero has the benefit of its services. Hence Tiomberombi is warned not to open the glass and thereby bring himself face to face with the spirit of the mirror. The *peit* in fact treats him as a poor ragged creature who will probably use the magical powers placed at his service to provide himself with food and clothing, and has no suspicion of the "vaulting ambition" which stirs beneath that lowly exterior. If the tale be not indigenous, it is certainly not of Indian origin: Tiomberombi's wife is no harem or zenana character. For although the tale might be regarded as a sort of humorous satire upon woman's weakness for gossip, which would seem to be so universal a trait as to awaken mirth and "point a moral" even here amongst this semi-civilized race, and no doubt reigns supreme amongst the female members of an Indian household; yet the wife of the tale is a free, independent, masterful person. If it is her irrepressible love of gossip which brings on the catastrophe of the story, it is also she who saves her husband by her provident arrangements and practical genius. Woman is highly esteemed in the Nicobar islands which, it must be remembered, are part of the Malay archipelago and are only politically connected with India.

One word as to the "tékeri." Some Nicobarese say it is a snake which eats snakes. The ophiophagus, however, is not found here. The boa (python *Schneideri*) which is the only very large snake of these parts is well known to the inhabitants, does not eat snakes, and has another name. Others assert that it is a big beast of the jungle like the Akafang which is a spirit animal seen by the Manlŏĕnĕs at night. It is described as a rather big creature with an enormous tongue, the head bearing a mane. It might be the effort of the imagination to conceive the lion; I would suggest, however, that the "tékeri" is the tiger. The Nicobarese have been for many years in communication with Europeans and have heard Danish, Portuguese and English spoken. The word may therefore have been an importation from one of these languages, contributions from which have undoubtedly been made to the Nicobarese vocabulary (*cf. infra* "*lēbré*" *Anglicé* "*paper*"). Or it may be of Malay origin, and derived from شكر tĕgĕr, *strong*.

Inōle onghæ de Tiomberombi.

"Juchtéré io at tiũ en me?" "Hãõh,, io olkãle o(n)g." "Juchtéré wat me lõã, iéang tentié io olkãle o(n)g omiã."

Kãng, kõng, kãng, kõng. "Tiĩn paiũ?" "Tiũĕ-tiéãĕ-Tiomberombi!" "Tiĩn wẽ'n me"? "Tiéãĕ io olkãle o(n)g omiã, da ié io kãne ta kon omiã." "Wat-me, lohm, kéteit kaniut, kéteit kanhã." "Oh béharé, io ene io en kon omiã."

Tiomberombi an old tale.

• "Where are you going?" "Oh, I am going to split firewood.' "Then do not be in a hurry, I will go along with you and split fire wood for the chief" (or old man).

Kãng, kõng (the sound of the footsteps). (Some one asks) "who goes there"? (what men?). "I Tiomberombi and another." (I—we two—Tiomb.) "What are you going to do?" "We want to split firewood for the chief, for I want to marry his daughter (as I want (for) wife the child of the chief)." "Certainly not, you are poor man (servant) your coat and trowsers are ragged." "Never mind, if the chiefs's child is willing."

• Tiomberombi is a tale of love and its troubles. To make that clear it begins with a little introduction, not necessary to the story which follows. Some one is going to cut firewood, when Tiomberombi joins him, saying that he wants to cut wood for "the" old man. On their journey somebody accosts them and a little banter ensues. Kãng, kõng is onomatopoetic for the sounds of the footsteps. Tiũe = I, tiéãĕ

Juchtérénde, haréléndе, haré-é-éléndе lūĕ shinkām. Shéanlérénde na peit ona tékeri de pomōn. "Kāčtéré kănœh (1) orœ ieitié, tiĭt sho (2) kăpāh kā entié, kăpāh ţiūĕ da tékeri."

* Afterwards he went shooting for three days. He saw the peit and the tékeri fighting. "Friend! come! help me to kill (the tékeri) (says the peit); I do not want to be killed (entirely), I am being killed by the tékeri."

"Juchtéré tiĭn heniōatié makā, ţiĕn tioāha, tiĭt sho de parā, tiĭt sho de komnān." "Tiĭn io me?" "Hāă." "Jo en me tenmœla?" "Hāă, tiĭt sho." "Jo de tenmœla baiūhŏŏāl?" "Jo de tenmœla baiūhŏŏāl, dochne wē gñi, dochne wē tiong, dochne wē hifūĕ." "Kāĕ ta (3) kā."

† "Afterwards what hire am I to to have, what things? I do not want dollars, nor silver plated ware." "What do you want?" "I don't know (no)." "Will you have a looking glass?" "No, I will not." "Will you have a magic looking glass?" "Yes: I want a magic looking glass, that can produce houses, ships and boats." "(Well then) come (to me) bye and bye."

Harélhata en tékeri en Tiomberombi kompāhhange en tékeri.

‡ Tiomberombi shoots the tékeri, and the tékeri expires.

= we two, Tiomberombi is quite Nicobarese. Tiomberombi says that he is going to cut firewood, *for* he wants to marry the daughter of the old man. The other party intimates, that he has no chance, he is a poor man and ragged. At this T. laughs, for what does that matter if the girl likes him.

* After this he is out shooting and comes upon the peit and the tékeri fighting. Peit is used to designate all poisonous snakes. The tékeri the Nicobarese cannot identify. Some say it is not found in their islands, some say it might be a snake. If so, I would suggest the ophiophagus. The peit calls in the assistance of Tiomberombi to save him from the tékeri, [1] orœ ieitié = help me to kill, tié is the form of the 1st per. pron. pers. gen, dative and acc. as affix. [2] Kăpāh kā = die indeed, (kā added to make the kăpāh stronger).

† In true Nicobar fashion Tiomberombi bargains for remuneration, before he gives the help required, and the peit in his extremity promises him a magic mirror, and tells him to come and claim it bye and bye [3] kā for makā = later in the day, when the tékeri is killed.

‡ This he succeeds in doing, and then he goes (as any Nicobarese would be sure to do) for his present and walks off with his magic mirror: but without knowing the secret of it. This is characteristic of

"Jéangtéré ten tiūĕ," gnæh peit ŏl nang Tiomberombi, io rœwe henioahade." Orœ tenmæla baiūhŏŏāl. Tiūende. Shōatéré. "Hat doch, hat léap oliōle, io orīgnafātié." Etieitiéra en peit. "Jo me io wē, io hiléang, io oigne, tewāhagñe tenmæla, wat me ishāhagñe."

"Come with me," said the peit to Tiomberombi, "and receive your hire." He takes the magic looking glass and goes away. He returns. "I cannot manage it, I do not know the word (to speak) (*i. e.* the charm), it (the spirit) will kill me miserably." He applies to the snake, (who says): "If you want to do anything, if you are thirsty, if you are hungry, put the key into the lock of the looking glass, do not open it."

Juchtérénde tŏng de gñi en Tiomberombi ladīĕiĕ, io orœ kānde kon omiā en Tiouberombi. Juchtéré hat sho en omiā ten Tiomberombi da ene lohm.

* ThenTiomberombi returns home in the evening and wants to take to wife the daughter of the old man. But then the old man does not want Tiomberombi for he is poor.

Jtĕak en omiā de hatām, léat kam en kahæ haléa ioang tiafā.

† At night the chief is asleep, when the moon being at its highest (Tiomberombi) fetches a magic fruit.

Juchtéré ŏl hakī-ī-ī ende iokoleit anæh omiā, wīlgnede ŏl henlōwe harōĕ gñi Tiomberombi, mătai Tiom-

Then *very early* in the morning (expressed by the prolonged final syllable) the chief goes

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T., who has great confidence in himself. He has therefore to return and ask the snake to acquaint him with the secret, who tells him that he must use the key but not open the mirror. The meaning of this prohibition is that T. has no theurgic power and would be unable to control the spirit of the magic mirror if it were opened. Note also the low estimation the snake holds our ragged hero in. "If you want to do anything, if you are hungry and thirsty" says the snake, not dreaming of T.'s ambition.

* T. sets off home and wishes to take to himself at once the girl he loves. The old father however, evidently discredits the story of the magic looking glass, and will have nothing to say to him, as he is poor.

† During the night T. sets to, plants a magic fruit in the deep sea and by means of the spirit of the mirror produces an island from the deep sea and erects a house upon it. The text only tells us that he fetches the magic fruit, but it graphically describes how the old man in the morning on casting his eyes over the sea discovers Tiomberombi's new home.

berombi, iuchtéré tenfatgnede en omiã.

Tiimende omiã, ohngnede ræwe en Tiomberombi, io léat ko(i)n kontié. Juchtéré, ætæt de lẽbré Tiomberombi, kõmhata de lẽbré da omiã. Hat sho en Tiomberombi na omiã, dalgnato.

Juchtéré ræwe kãnde en Tiomberombi, kãĕ ta kãnde kon omiã; shõmhagñe da gñi Tiomberombi da ŏl henlõwe.

Juchtéré hatæ-æ-hende héang danõĕ tiong henkõk, io orĩgnafã Tiomberombi. Katöw en Tiomberombi de gñide. Hakõk, hakõk de gñi Tiomberombi, hat taiõ.

Juchtéré tentioãhlare en Tiomberombi da ŏl tiong, fãĕhange de

to bathe, and when he looks out to sea he sees Tiomberombi's house Tiomberombi's island, then he falls down (in astonishment).

* He weeps and sets off to fetch Tiomberombi, that he might become his son-inlaw. Also Tiomberombi wrote a letter and sent it to the chief. The chief does not want (to meet personally) Tiomberombi for he is shy.

Then Tiomberombi marries: as his wife comes the daughter of the chief; she is brought to Tiomberombi's house in the deep sea.

† Then came sailing (from a distant land) a ship armed with cannon to kill Tiomberombi. He remained in his house. The ship went on firing and firing at Tiomberombi's house but did not hit it.

‡ Then Tiomberombi boarded the ship and cut the noses and cut off

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* Great is his astonishment, and it affects him so much, that he falls down and weeps. The text is not very clear on this point. It says that the old man goes off to fetch T. for a son-in-law, then T. writes him a letter and it ends by saying that the chief does not want to meet him, as he is shy. It is quite clear that the tables are turned. Before the old man despised the poor, ragged T. Now he feels shy to approach him in his great prosperity. Whether the letter from T. is friendly, and therefore puts the old man to shame, or the letter is haughty and makes him feel shy, the text leaves to fancy to decide. On the whole the Nicobarese are shy, and affect to be more so, than they really are. Difficulties, however, are overcome, and Tiomberombi attains his wishes and marries the girl whom he loves, who moreover, it is evident from the first, loves him as is seen from his remarks about her in the introduction.

† No earthly pleasure is unalloyed. When he is happily married and settled enemies appear on the scene to kill him. He is however protected by magic and sits unconcernedly in his house, whilst the guns of the man-of-war, which had come to destroy him, make ineffectual attempts to hit it.

‡ At length Tiomberombi arises and proceeds to board the ship single handed and mutilates the crew. The man-of-war thereupon returns to

gmoa, iāthange de nang. Tiūengede en tiong henkōk, tiū mătai; di do (tiĭt doch) da en hæt gmoa, hæt nang da ene fāĕhashe da Tiomberombi. Shĭĕlende ætæt de lĕbré omiā da ŏl mătai shom tiĭnmōnggne tiong io kōĭung en Tiomberombi.

Juchtéré te gñi kānde, gñi komiāde en Tiomberombi. Hatæ-œ-æhende en shom tiĭnmōnggne tiong henkōk, hakōk hakōkende, hat héwe mătai, hat taiō.

Tentioāhlare de ŏl tiong en Tiomberombi oræ ioang tiafā, kawălle de ŏl kamelœ, pompangshe en tiong, heméang te danōĕ ta ōt de[4] āh.

Shĭĕlende fāĕhange gmoa,iāthange nang. Tiūengede en tiong. Di do (tiĭt doch) da.

the ears (of the crew). The ship then left for its own country; they could not succeed, for they had no noses or ears, Tiomberombi had cut them off. Then the chief of the country wrote on paper (*i.* e., issued an order for) ten ships to make war on Tiomberombi.

* Now in the house was his wife, Tiomberombi (himself) was in the house of his father-in-law. The ten ships of war came sailing (from the distant land) and fired their guns; (but) they did not see the island, they did not hit.

Tiomberombi boarded a ship and took magic fruit with him, which he threw into the sea; the ships sank. One ship (however, still) remained (*lit.* alive).

† (Again) he set to cut noses and cut off ears. The ship left. It could do nothing (not succeed).

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its own country, the king whereof organizes an expedition of ten ship to chastise him.

* From the prolonged sound in hatæhe we are led to infer that the expedition had far to sail. When this formidable expedition arrived, Tiomberombi was with his father-in-law; only his wife was in the house. He must have left the magic mirror behind him, that would explain how it was that the guns were fired many times, but did no harm, the island had become invisible. Tiomberombi proceeds on board one of the vessels, the crew of which he mutilates in his former manner, and sinks the other nine by throwing magic fruit into the sea. [4] *āh = lives;* it is usual to use this word, and kăpāh = die, of vessels. The Nicobarese assert that these words mean in this connexion no more than "keep afloat" and "sink," but I think they do. The Nicobarese may use these terms only in a figurative sense now, and I believe they do, but yet they sacrifice to their canoes (*vide* "ceremonies at death &c.") after a race. I have seen them sacrifice on removing a canoe yet in the rough log, out of the jungle; moreover, they use a bow ornament for their boats like the open mouth of some monster. Are these traces of some old worship now obsolete?

† The ship that was spared returns whence it had set out and reports the hopelessness of the undertaking.

Gnahhagñe da nang omiă ŏl mătai, tiĭt honganghashe ta doch.

They reported to the chief of their country, that there was no chance of success.

Juchtéré iuhggnede en pomō-ō-ō-ĕshe enkāne léang Kanōadæ Petiang de ŏl gñi Tiomberombi. Tiĭn hanædashīĕn tiong banōne.

* Then came visiting a (very) old woman, her name was Kanōadæ Petiang to Tiomberombi's house. (She wanted to ascertain) what manner of powers he possessed.

Itēaknede ŏl katæde kān Tiomberombi; (5)haléa shæĭ kŏĭ kan Tiomberombi, itēaknede kān Tiomberombi. Kamheng tiūengede Kanōadæ Petiang, léat kōm de tenmæla Tiomberombi. Tendŏktere de mătaide, gnahhagñe de nang omiă. Léat, léat de kōm tenmæla Tiomberombi, hæteiŏnnen tiong banōnĕ.

Tiomberombi's wife was sleeping in her chair: she (Kanōadæ Petiang) cleaned the hair of Tiomberombi's wife, who slept on. At noon Kanōadæ Petiang left, having taken Tiomberombi's looking-glass. She arrives at her country and reports to the chief, (that the trouble) is over, that she has taken the looking-glass away from Tiomberombi, the cause of the power he possesses.

Hagnæhhang te tiong ianæ shōatéré mat mătai Tiomberombi; hemĕang danōĕ tiong ă lă, io ræwe Tiomberombi.

† He orders one ship to return to Tiomberombi's place; it was (only) a two-masted ship to fetch Tiomberombi away.

Tendŏktere en omiă tiong da mătai Tiomberombi. Hakŏk, hakŏkende taiō ŏl henwæh, pomtakshede en henwæen.

The captain arrives at Tiomberombi's island. He fires his cannon and hits the flag and the flag falls.

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* What the valour of men could not achieve was now to be attempted by a woman. An old hag Kanōadæ Petiang comes to pry into the secret of Tiomberombi's immunity from danger and of his success against such odds. She accomplishes her object in the following manner. She was probably an old acquaintance of T.'s wife, to judge from the intimate terms on which they are. T.'s wife goes to sleep in her chair as the other soothingly cleans her hair, (5 haléa shæĭ has not been literally translated). Having thus lulled her into a deep sleep, Kanōadæ Petiang possesses herself of the magic mirror, which we may surmise the sleeper had tattled to her about and had for security placed under her (head) pillow, and hastens with it to her own country informing the chief thereof that Tiomberombi is now defenceless.

† The chief thereupon orders but a two-masted vessel to proceed and bring Tiomberombi away. He is not going to break a fly upon the wheel. The little ship arrives and is sufficient to accomplish its mission.

Hat doch en kān Tiomberombi, heméang ioang de gñi; Tiomberombi léat itŏĕ de mătai tiiĕ kānde. Juchtéró dæ(a)ngne en Tiomberombi, hæniede io heniongiede kānde; de heméang tăt kŏĭ.

"Tiū en tenmæla? Tiū en tenmæla?" gnæh Tiomberombi. "Tiĭ de dŏk de gñiha?" "Kāĕ pomŏĕshe da bakō kŏĭ Kanōadæ Petiang." "Oh ié karé-(6)hæt āh! da ene hat ōt en tenmæla. Kāhaĕ en shéiau."

Shumiauhata kān Tiomberombi. Döngle te gñi Tiomberombi en kalæng, io oræ kān Tiomberombi, oræ tioāha, oræ shéiau.

Iūakhĕgñĕ de shéiau, iūakhĕgñĕ enkāne.

Tiomberombi's wife cannot (scil: defend the place), she is alone in the house; Tiomberombi had gone on a visit to her father. Now Tiomberombi ran (*i. e.*, to the canoe) and hurried (across the water) to his wife who was quite alone.

* "Where is the glass? where is the glass?" cries Tiomberombi. "Who has been in the house?" "The old greyhaired (woman) Kanōadæ Petiang." "Ah me! if that be so, then we shall not live! for now the looking glass is not here. Bring a bag."

His wife puts Tiomberombi in a bag. The foreigners came into the house of Tiomberombi; they took away his wife, (all) his property and the bag.

† The bag and the woman were brought on board.

The flag which waved over Tiomberombi's island kingdom is shot away. He is from home at the time on a visit to his wife's father, his wife is alone in the house. But he sees the fall of the symbol of his power, and hastens home to enquire into and repair, if he can, the catastrophe.

* In great anxiety as soon as he comes in, he cries, "Where is the magic mirror?" It is nowhere to be found. "Who has been here?" he enquires and on learning that the old woman had been there, he resigns all hope and says that it will cost them their lives. 6 *hæt* āh. *Hat* and *hæt* mean "not;" *hat* is used for the singular, *hæt* for the plural. *Hæt āh* = not live. The meaning supplies "I or we shall not live," *hæt* makes it "we." He resolves upon concealing himself, however; and with the assistance of his wife he is enclosed in a bag and placed amongst the household property. His brave, faithful wife has to face the enemy.

† As he no doubt anticipated, they land and convey everything away, his wife, his property, his all, literally bag and baggage. He thus manages to have himself and his household gods conveyed away together. Our hero in the bag is placed in the bow of the vessel. The vessel sinks to the water's edge at the bow. He is shifted aft,

Juchtérénde pomiāmshe lakōĭla, hatiōhange en shéiau larille, pomiāmshe larille. Hat doch dök de mătai, ([7])kawălhange en shéiau ŏl kamelæ. Hatæ-æ-æhende, tendöktere, léat gnung gũide, gnung tiŏā, oræ en tiong.

Then it happened that the bow sank down: the bag was (therefore) shifted aft. Then the stern of the vessel sank down. They could not reach land (so) they threw the bag into the sea. They sailed and sailed and arrived at their destination, there was no house, no property, that the ship had brought away.

Lūng, lūng, lūng en shéiauende gnahlalende. Keithala en shéiau en Tiomberombi, léat gñŏt en inōat en kānde iohl tenwā.

* The bag drifted and drifted on to hard ground. Tiomberombi cut open the bag, his wife had put the knife round his neck with the key.

Léat oræ kānde ŏl mătai komŏĭung. ([8]) Omshōnghande Tiomberombi. "Tiĭn paiū"? "Ţiūĕ, tiūĕ Tiomberombi ([9]) kenmolö. "Hat me de

† The woman was landed in the enemy's country. Tiomberombi travelled about. "Who are you?" (asks someone). "I am Tiombe-

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the vessel sinks at the stern. The reason for these extraordinary phenomena is not explained, but it will be seen later that he carried about his person the key of the magic mirror in a string together with a knife. The ship's company fear for the safety of their craft and tracing their danger to something uncanny about the bag dropped it overboard. [7] Kawălhange implies that the stern was *level with the water*. To throw a thing from a higher to a lower level is kawălhashe. The text indicates thus that the ship was in danger and that the crew were in consequence alarmed.

* The bag containing the hapless Tiomberombi drifted at length to land. His wife had hung the key of the magic mirror and a knife about his neck.

† With the latter he releases himself from the confinement of the bag and wanders about from place to place, till apparently he arrives at his enemy's country where his wife has already been conveyed and is living as a member of the household of the chief. [8] *Omshōnghande* with the enunciation of the second syllable prolonged to indicate that he wandered about a great deal. During his travels some one, suspecting his appearance probably, accosts him. When the wayfarer says he is Tiomberombi the younger, the suspicions of the interrogator were only deepened. [9] kenmolö = called by another man's name. Tiomberombi, however, assures him, that he is not the national foe, but another Tiomberombi, a man of lowly degree whose occupation is cooking and not

kŏĭunggne ?" "Hăă, tiŭĕ Tiomberombi kenmolŏ." "Tiĭn léap me ?" "Oh okpāk dāk." Ţiĭn léap me déwĕ ? "Hăă, heméang okpāk dāk léap."

Juchtéré oknōk en omiā. Iūakhahende ganlongtei en Tiomberombi ŏl dāk tōp en kānde. Hat héw omiā. Shinkŏĕhange annæh kān an, héwĕ ganlongtei en enkāne, hat héw en omiā.

Gnahhagñe en kaniom da shiĕn héwen ganlongtei de olfang enkāne. "Hat æchtéréshe !" gnæh kaniom. "Tiomberombi kā, Tiomberombi omiā."

Ræwe, katiāpe, hat katiāpe karau, henpōn. Juchtéréende shōmhata de ŏl gñi mang(n)æh. Hat itēak enkāne, teina pohōa omiā.

Juchtéré hatāmende urōhetshe rombi, the younger ?" "Is it not you who made war ?" "No, I am Tiomberombi, the younger." "What work can you do ?" "I can boil water." "What else can you do ?" No(thing), I know only that one thing, to boil water."

Now it happened after this that the chief was eating. Tiomberombi slipped his finger-ring into the water his wife was to drink. The chief did not see (him do it). His wife drank off at a draught and saw the ring, but the chief did not see it.

* A boy called out, who saw the ring in the woman's mouth.

"It is not true," said the boy, "it is Tiomberombi himself, Tiomberombi the chief."

They seize him and bind him they do not bind him with chains, but with strings. Then he was brought into a stone house. The woman (*i. e.*, his wife) did not sleep for fear of the chief.

† Now it happened in the night,

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fighting. At length he manages to procure his introduction to the presence of his enemy the chief, where he finds his wife, who, however, does not recognize him, as he is probably disguised. In order to make her aware, who he is, he deposits his finger ring in the cup of water, which she is about to drink. On lifting the cup to her mouth she sees and recognizes it, and, no doubt, its owner.

* Tiomberombi successfully eludes the observation of the elders, but he reckoned without an *enfant terrible*, whose presence perhaps he had not condescended to notice. This sharp-eyed youngster detects Tiomberombi's manœuvre and denounces him, and he is then seized, tied up and thrown into a stone built prison. His wife meanwhile, who is still with the chief, spends the night without sleep through fear and dread. Tiomberombi's fortunes are now at their lowest ebb. But succour comes from an unexpected quarter.

† Numbers of rats were heard scampering about the room, in which

komæt. "Da de ra dō, da de ra dō."

"Kāētéré en me," gnæh Tiomberombi nang komæt.

"Juchtéré, tiīn io me ([10])kātiīĕ?"

"Doch en me oræ tenmæla?"

"Tiū tenmæla?"

"Got de kat(ŏ)ā kanéala omiā, got te tenmæla tiūĕ.

"Katei en tiéōĭende makā."

Kāt, kāt, kát, kāt kanéala omiā ende. Jana iūēnléré en omiā, keignade en komæt. Hatiō-ō-ende, tăpăk to gñi mang(n)œh da Tiomberombi léat katiāpe.

"Da de ra dō, da de ra dō."

"Kōm de tenmæla?"

"Oh ninne, tiéōĭ léat oræ."

Hatiō-ŏ-ō-hata en tenmæla ta tei

that there were many rats. "Patter, patter, patter" (went their feet).

"Come here," said Tiomberombi to a rat.

"What do you want, friend?"

"Can you get my looking glass."

"Where is the looking glass?"

"It is under the pillow of the chief, (there) is my looking glass."

* "We will carry it off by and bye."

They worked and worked away at the chief's (head)pillow. If the chief moved in his sleep, the rats stopped. They dragged (it) on and on, and arrived at the stone-built house where Tiomberombi was imprisoned.

"Patter, patter" (went the rats).

"Have you got possession of the looking glass?"

"This is it, we have brought (taken away) it."

They dragged the looking glass

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he is imprisoned, and he calls one of them to him. He begs the rat to enable him to regain possession of the mysterious mirror, and tells him he will find it under the head pillow of the chief.

[10] *Kătiĕ* I have rendered by "friend." *Tiĕ* means "parent." *Kă* is a prefix added to all words of relationship tiom = grandparent, tiĕ = parent, tiau = elder $\begin{cases} \text{sister} \\ \text{brother} \end{cases}$, tau = younger $\begin{cases} \text{sister} \\ \text{brother} \end{cases}$ kon = child, and it is the polite way always to address persons with these words with kă as a prefix. In doing so due consideration must be given to the relative ages of the speakers. This is the only way that politeness can be shown and as all are socially equal amongst the Nicobarese this way of address is very nice.

* The rats promise to fetch the looking glass later in the night. Kāt, kāt is onomatopoetic for the working of the rats. The chief sleeps soundly, but occasionally he moves his arms and they (keigna=wait, stop) hide. Having secured the mirror, they drag it into the house, where Tiomberombi lies bound, and up to where, about his neck, by the fore-

Tiomberombi. Kāětéré da tiuk tenwā da olkolāhla. Tewāhata.

"Tiĭn io me," gnæh iwi de ŏl tenmæla.

"Hæt āh tiéāĕ kōĭunggne, hat mătai itā, hat ōt kāntié."

"Tiĕn io me ?"

"Wē tiong, wē henwæh, wē hifūĕ !"

Wē, wē, wē, wē, léat. Shāmhagne de tiong ŏl henlōwe.

"Kashī [11]kāĕ tiiĕ ifæ makā."

"Katei de tiéōĭ."

Oræ enkāne, kaĕtérénde.

Jūakhĕgñe enkāne de ŏl tiong.

Wēla lōĕ, hatæ-æ-æhende, io tiū Tiomberombi. Urŏhetshe henwæh da mat tiong Tiomberombi, munhang en omiā mătai. Fōha tapōade en omiā mătai, endūĕ henkōk Tiomberombi.

on and on till it came to Tiomberombi's hands. It came to where the key was about his neck. (Then) he put the key in the lock.

"What do you want," said the spirit of the mirror.

"We two (T. and his wife) can-
"not live on account of this war,
"this is not our country, I have
"not got my wife."

"What do you want ?"

"Produce a ship, flags, boats !"

On and on the structure grew and now it is finished. The ship is brought into deep water.

* "What about the absent mother of you all, then ?"

"We will bring her."

† They took away the woman, she comes.

The woman goes on board the ship.

The sails are set, and Tiomberombi goes sailing off. There are many flags on Tiomberombi's ship, and the chief of the country is (very) angry. He beats his cheeks for Tiomberombi's guns are bigger (than his).

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sight of his wife, the key of the looking glass and a knife had been hung. The rats so place the mirror in juxtaposition with the key, that the tied up hands of the prisoner are able to insert the key in the glass, when once more Tiomberombi is master of the situation. The bonds fall off, the prison falls, and soon he has got his ship and boats ready with pennons flying in triumph.

* Then he thinks of his faithful wife. There is a poetic touch in his appeal : kashī kāĕ tiiĕ ifæ makā. [11] Kāĕ is a demonstrative pronoun rarely used and refers to persons or things absent. He speaks to the spirits under his orders and asks about "their mother."

† The spirits of the mirror anon bring her on board. Tiomberombi now gaily sails forth with all his canvas spread and flags displayed, his erewhile victor beating his cheeks with impotent rage in the meantime, as he beholds Tiomberombi's triumphant departure to his own land.

Tiū en Tiomberombi, wēhăhăt iŭk, păniăp omtōm, mătai léat hat ōt.

Tendöktéré Tiomberombi de mătaide.

Wīlgnede komiă, héw, wēhala henwæh Tiomberombi, gñi Tiomberombi, mătai Tiomberombi. Urōhetshe henwæh Tiomberombi de mat gñi. Io dök de mătai komiāde.

"Āh kŏmĕkăt?"

"Āh."

"Katei en me?"

"Hāă, tiĭt orī, hantă wē iŭk."

"Kashīhede makā?"

"Oh, wē gñi de lapōĕ," gnæh Tiomberombi nang komiāen.

"Watme inōle onghæ da ene

* Tiomberombi departed. Tiomberombi raised a surf (by magic). All died, the country disappeared.

Tiomberombi arrived at his own country.

His mother-in-law looked out and spied the flags, Tiomberombi had hoisted, his house, his island. There were many flags about his house. He came to his mother-in-law's village.

"Are those with you (*i. e.*, my daughter) alive?"

"Alive."

"How did you accomplish it?"

"No, we did not kill, we only raised a surf."

"What now (how about bye and bye)?"

"Now we will make a nice house," said Tiomberombi to his mother-in-law.

"Do not tell the tale or else the

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* And when by the potent aid of the spirit of the looking glass Tiomberobim has raised a tremendous surf and swept him and his land away, his success is complete. In due course the spot is reached where his old home had been and apparently the magical properties of the mirror are resorted to again to restore in a twinkling his former island home as it was before misfortunes overtook him, for his mother-in-law, when scanning the horizon for any signs of the return of the captives, spies Tiomberombi's victorious pennons waving over his house and island complete as of yore. Tiomberombi with somewhat unusual ardour is soon in the arms of his mother-in-law (!) and answering her anxious enquiries as to his own and her daughter's welfare (kŏmĕkăt = me kăkăt). He tells her of the utter extinction of his foes, and how it had been accomplished, and then they fall to picturing out a bright and prosperous future, which is to be theirs by the aid of the magical mirror. Taught by experience he strictly enjoins, however, both mother-in-law and wife not to reveal the secret of their prosperity. But alas!! for the frailty of woman's tongue: whilst he is absorbed in eating, the women folk gossip about it; the island breaks up and is submerged and weeping and wailing they go down to their watery grave.

dākne mătai makā!" Juchtéré Tiomberombien oknōk. Oliōle'n komiāen, ŏliōl' enkāne en inōle onghæ. Pomdaknede en mătai, pompangshede. Tiim ofæ. Kăpāhende omtōm. Léatende.

island will break up again." Now Tiomberombi was eating. His mother-in-law and his wife related the story. Then the island broke up and sank. They all cried out. They all died. Finis.*

Notes on the history of Religion in the Himálaya of the N. W. Provinces.
Part I.—By E. T. Atkinson, B. A., F. R. G. S., B. C. S.

In reading the wonderful story told by the great Chinese travellers Fah Hian and Hwen Thsang of their wanderings through India in the fifth and seventh centuries, one cannot but be struck with the greatness and importance of Buddhism as then understood, yet in the tenth century we hear very little about it, and about the twelfth century Buddhism appears to have ceased to be the faith of any considerable section of the Indian people. The inquiry naturally suggests itself, how did Buddhism disappear; what were the causes which effected the downfall of a system of religion which, for fifteen centuries occupied the thoughts, and held the affections of a great part of the population of this vast country, and had such defenders and expounders as Aśoka, Kanishka, Nágárjuna, and the Guptas: a system too which has given us learned theologians, subtle metaphysicians and great writers on almost every subject whilst its apostles have converted the nations of Eastern Asia from Mongolia on the north to the islands of the Eastern Sea on the south. In the search for an answer to these questions one finds little aid in the existing literature devoted to the religions of India. This for the most part consists of compilations from works which, however interesting and, however valuable they may be, have no part in teaching or guiding the actual living beliefs of the masses. For this reason we are compelled to adopt the analytic method, and first of all ascertain who are the deities worshipped by the people and the ritual in actual use, and then attempt to trace

* The Rev. C. H. Chard, Chaplain of Port Blair, has very kindly helped me with the English part of this paper.

out the history of the various developments of the ascertained primitive forms of belief in India which have combined to give us the popular religion of the present day. Every one that deals with a subject like the present one, must feel the magnitude of the task, and the necessity that exists for the greatest caution in attempting to establish any general propositions. The notes on this subject that I have collected are therefore offered as a humble effort to aid others in the true method of inquiry into the history of religion in India, and I am not aware that their subject has ever been noticed before. My researches have been confined to the tract in the Himálaya between the Sárda on the east and the Tons on the west including the British districts of Kumaon, Garhwál and Jaunsár under the Government of the North-West Provinces of the Bengal Presidency. It is to be understood, therefore, that my remarks refer only to this tract, and that whatever merit they may be held to possess is due to the fact that they are the outcome of a very close examination of the religious phenomena of a country famous in Indian history. The oldest Indian books mention the great shrines of Badarináth and Kedárnáth, mounts Meru and Kailás, the holy lake Mánasarovara and the places become sacred by the wanderings of Kṛishṇa and Arjuna, Ráma and Sítá, Draupadí and the Páṇḍavas and in comparatively modern times the scene of the labours and the final resting-place of the great reformer Sankara Áchárya.

Religion in India.—There is no country, perhaps, in the world in which religion exercises more influence on social and political life than in India. Religion gives the key-note to most of the great changes that have occurred in the history of the races inhabiting this country from the earliest ages to the present day. To almost every individual in this land its forms are ever present and exercise a perceptible influence on his practices, both devotional and secular, and yet the true history of religious thought in India has yet to be written. There is an esoteric school and an exoteric school: to the former too much attention has been paid, to the great neglect of the living beliefs which influence the masses of the people. Most writers on India have looked to the Vedas and the works connected with them as the standard by which all existing forms of religious belief in India are to be judged and to which all are to be referred. Influenced doubtless by the antiquity, richness and originality of the Vaidik records, they have sought to connect them with the popular religion, and have viewed modern beliefs more as to what they ought to be than as to what they actually are. As a matter of fact the Vedas are practically unknown to, and uncared for, by the majority of Hindús. There is no translation of them into the vulgar tongue in use amongst the people, and it would be contrary to the spirit of Bráhmanism to

popularise them or their teachings. They are less known, therefore, to the Hindús than the Hebrew original of the Old Testament is to the majority of the Christian populations of Europe. Some sects do not acknowledge their authority in matters of faith and practice, and they are in no sense 'a Bible' to the masses except to a few of the learned, and have little practical influence over modern religious thought outside the same class. Though portions of the Vedas, notably of the collection ascribed to the Atharvans, are recited at ceremonies, and verses from them occasionally occur in the domestic ritual, as a rule, neither the celebrant nor the worshipper understand their purport. They are learnt by rote and those employed in the ceremony regard the words used more as spells to compel the deities than as prayers for their favour. Yet we would ask the ordinary student of Indian affairs to formulate what he understands by Hinduism, and he will at once answer, the religion of the Vedas. We must, however, accept the term Hinduism as a convenient one, embracing all those beliefs of the people of India which are neither of Christian nor of Musalmán origin. But within this pale we have sects as divided from each other as members of the Society of Friends are from Roman Catholics. We have followers of the Vedas, of Bráhmanism, of Buddhism and of the polydæmonistic tribal cults of the aboriginal populations and of eclectic schools, religious and philosophical, of every kind and class. The religion of the Vedas never took hold of the mass of the people.* It was followed by Bráhmanism designed to exalt the priestly class, but even this system had to abandon the Vaidik deities and admit the dæmons of the aborigines to a place in its pantheon, or otherwise it would have perished. Buddhism was originally a protest against sacerdotalism, not necessarily against the Bráhmanical caste, but it too succumbed to dæmonistic influences, and degraded and corrupted, fell an easy prey to its rival Bráhmanism. Both sought the popular favour by pandering to the vulgar love of mystery, magical mummeries, superhuman power and the like, and Bráhmanism absorbed Buddhism rather than destroyed it. The Buddhist fanes became S'aiva temples and the Buddhist priests became S'aiva ascetics or served the S'aiva temples, and at the present day the forms and practices in actual use may be traced back as readily to corrupted Buddhism as to corrupted Bráhmanism. There is a period of growth and of decay in religious ideas as in all things subject to human influence, and precisely the same rules govern their rise, culmination and fall in India as in Europe. Every principle or thought that

* By this is meant the great majority of the races of India. There have always been some with learned leisure who have adhered to the higher faith in one God and have never bowed to Siva or Vishṇu, but their principles are unknown to the cultivator, the trader and the soldier, or at least only in a very diluted form.

has moved the schools of Greece or Rome has equally shared the attention of Indian thinkers, and in the kaleidoscopic mass of beliefs that can be studied in any considerable Indian town, we may perceive analogies of the most striking character to the broad forms of belief and modes of thought in many European cities.

Religion in the Himálaya.—In examining the condition of religion in the Himálayan region we find a curious blending of pre-Bráhmanical, Bráhmanical and Buddhistic practices which it will take some time and attention to separate and ascribe to their original sources. It would doubtless be easy to dispose of the question by stating that the prevailing religion is a form of Hinduism. This would be perfectly true, but at the same time could convey no definitive idea to the inquirer's mind as to what the real living belief of the people is. For the more complete examination of the forms of religion existing in the N. W. Himálaya we possess a record of the teaching in 350 temples in Kumaon, in about 550 temples in Garhwál and in about 100 temples in Dehra Dún and Jaunsár-Báwar. For the 900 temples in Kumaon and Garhwál we know the locality in which each is situate, the name of the deity worshipped, the broad theological division to which the deity belongs, the class of people who frequent the temple, and the principal festivals observed. The analysis of these lists shows that there are 250 Saiva temples in Kumaon and 350 in Garhwál, and that there are but 35 Vaishṇava temples in Kumaon and 61 in Garhwál. To the latter class may, in a certain sense, be added 65 temples to Nágarája in Garhwál which are, by common report, affiliated to the Vaishṇava sects, but in which Siva also has a place under the form of Bhairava. Of the Saiva temples, 130 in Garhwál and 64 in Kumaon are dedicated to the Sakti or female form alone, but of the Vaishṇava temples in both districts only eight. The Sákti form of both Siva and Vishṇu, however, occurs also in the temples dedicated to Nágarája and Bhairava, or rather these deities and their Saktis are popularly held to be forms of Vishṇu and Siva and their Saktis. Of the Saiva Sakti temples, 42 in Garhwál and 18 in Kumaon are dedicated to Kálí, whilst the Sakti forms of the Bhairava temples are also known as emanations of Kálí. Nandá comes next in popularity and then Chaṇḍiká and Durgá. The remaining temples are dedicated to the worship of Súrya, Gaṇeśa and the minor deities and deified mortals and the pre-Bráhmanical village gods who will be noticed hereafter. The outcome of this examination is therefore that Siva and Vishṇu and their female forms are the principal objects of worship, but with them, either as their emanations or as separate divine entities, the representatives of the polydæmonistic cults of the older tribes are objects of worship both in temples and in domestic ceremonies.

Dæmonism.—Whatever may have been the earliest form of religious belief, it is probable that it was followed by a belief in dæmons or superhuman spirits to which the term 'animism' is now applied. The Greek word 'dæmon' originally implied the possession of superior knowledge and corresponds closely to the Indian word '*bhúta*,' which is derived from a root expressing existence and is applied in the earlier works to the elements of nature and even to deities. Siva himself is called Bhúteśa or 'lord of *bhútas*.' With a change of religion the word dæmon acquired an evil meaning, and similarly the word *bhúta* as applied to the village gods carries with it amongst Bráhmanists the idea of an actively malignant evil spirit. Animism implies a belief in the existence of spirits, some of whom are good and some are bad and powerful enough to compel attention through fear of their influence. They may be free to wander everywhere and be incapable of being represented by idols, or they may be held to reside in some object or body, whether living or lifeless, and this object then becomes a fetish* endowed with power to protect or capable of being induced to abstain from injuring the worshipper. Examples of both these forms occur amongst the dæmonistic cults of the Indian tribes. As observed by Tiele† "the religions controlled by animism are characterised first of all by a varied, confused and indeterminate doctrine, an unorganised polydæmonism, which does not, however, exclude the belief in a supreme spirit, though in practice this commonly bears but little fruit; and in the next place by magic which but rarely rises to the level of real worship * *. In the animistic religions, fear is more powerful than any other feeling, such as gratitude or trust. The spirits and the worshippers are alike selfish. The evil spirits receive, as a rule, more homage than the good, the lower more than the higher, the local more than the remote, and the special more than the general. The allotment of their rewards or punishments depends not on men's good or bad actions, but on the sacrifices and gifts which are offered to them or withheld." Even the Aryan religion held the germs of animism, but it soon developed into the polytheism of the Vedas, and this again gave rise to a caste of expounders whose sole occupation it became to collect, hand down and interpret the sacred writings and who in time invented Bráhmanism. Buddhism, as we shall see, was an off-shoot of Bráhmanism, and it is to the influence of these three forms of religious belief—Animism, Bráhmanism and Buddhism—that we owe the existing varied phases of Hinduism, and paradoxical as it may seem the masses are more Animists and Buddhists in their beliefs at the present day than Bráhmanists. We

* See Max Müller's Hibbert Lectures, p. 56.

† Outlines of the history of Ancient Religions, p. 10, and Wilson in J. R. A. S., V., 264.

shall first of all take up the festivals commonly observed by the Kumaon Khaśiyas as the people of that country are commonly styled by their neighbours, then the domestic ritual, and then the various forms of the deity worshipped in the numerous temples that stud nearly every hill and valley of any importance throughout the Kumaon Himálaya. We shall then follow the historic method, and attempt to trace out the development of the existing forms from the earlier Vaidik and Pauránik deities, and show how the pre-Bráhmanical conceptions have not only been engrafted on the Vaidik ideas, but have practically swallowed them up and led to the existing rich confusion.

Kumaon calendar.—Before proceeding with a description of the religious festivals observed in Kumaon, it is as well to note that there are two modes of computing time in common use, one founded on the sidereal divisions of the months, and the other on an intricate adjustment of the solar to the lunar year.* The local names of the months are:—Chait, Baiśákh, Jeṭh, Asáṛh, Śaun, Bhádo, Asoj, Kárttik, Mangsír, Pús, Mán and Phágun. The Śaka *sanvat* follows the solar year, and is used by the great mass of the Khaśiya population, and in the calendar of festivals dedicated to the worship of the pre-Bráhmanical forms and the indigenous local deities. The Vikramáditya *saṃvat* is adapted to the luni-solar year. It is only used by the later and more orthodox rulers in public documents, and is confined amongst the people to the calendar of festivals borrowed from the use of the plains, the calculation of nativities by the fashionable Jyotishís and generally in all orthodox ceremonies. The gradual conversion of the Khaśiya population to Bráhmanism is a phenomenon well marked in this portion of the Himálaya. The prosperous Dom (outcaste) mason becomes a Rájpút and the so-called Khaśiya Bráhman, a Bráhman, and both mark their advancement in the social scale—for here orthodoxy means respectability—by adopting the stricter forms in use in the plains. One conclusion we may safely draw that the use of the Śaka era in secular matters and the solar calendar in religious observances is characteristic of the non-Bráhmanised populations, and may be adopted as a safe guide to the decision whether a given observance is of Bráhmanical or other origin.

Chait.—The month Chait is considered the first month of the year in Kumaon. The eleventh of the dark half is known as the *Pápa-mochaní ekádaśí*, and is observed by those who keep the elevenths of every month sacred. The first nine nights of the *sudi* or light half are known as the Chait *nava-rátri* and are sacred to the worship of the Śakti form of Śiva

* For an elucidation of these systems: see Thomas' Prinsep, II, 148: H. H. Wilson's works, II, 151: VII, 284: Calcutta Review, I, 257: XIII, 65.

as Nava Durgá, the nine forms of Durgá. These are in common acceptation here :—Sailaputrí, Brahmachárini, Chaṇḍaghaṇṭá, Kushmáṇḍá, Skandamátá, Kátyáyiní, Kálarátrí, Mahágaurí and Siddharátrí. Durgá is also worshipped under her other forms as Kálí, Chaṇḍiká, &c., at this season. Those who eat flesh, sacrifice kids to the goddess, using the Nirṛiti name in the presentation ; and those who do not eat flesh, offer grain and flowers and use the name of one of the milder forms in the consecration. On the ninth of Chait *sudi* known as the *Ráma-navamí*, festivals are held at the temples of the Vaishṇava form Rámapádaka in Almora, Uliyagáon and Másí. The Chait *nava-rátri* is also the season of the great *sangati* or fair at the Sikh temples of Guru Rám Rái in Dehra and Srinagar. The eleventh of the light half is known as *kámadá*, when widows worship Vishṇu and offer grain, fruit and flowers to the deity either in a temple or to a *śálagráma* stone in their own home. The day of the full moon is observed as a festival in the temple of Ákáśabhájiní in Saun. On this day also the houses of the pious are freshly plastered with a mixture of earth and cow-dung and no animal is yoked : hence the name *Ajoṭá*.

Baiśákh.—The eleventh of the dark half of Baiśákh is known as the *Varárthiní ekádaśí* and is observed by widows like the *kámadá* of the light half of Chait. The third of the light half is called the *Akshaya* or *Akhai tritíyá*, and no one ploughs on that day lest some misfortune might occur. The Sikhs call it the *Sattwa-tíj* and observe it as a festival. The *Gangá-saptamí* or seventh devoted to the river Ganges is marked by special services in several places along the Ganges. The observances prescribed for the *Mohaní-ekádaśí*, or eleventh styled *Mohaní*, are seldom carried out in Kumaon except by those who, having suffered much in this life, are desirous of obtaining a better position at their next birth. Old men and women amongst the poorer classes worship Vishṇu on this day. The fourteenth of the light half is known as the *Nara-Siṃha chaturdaśí* which is observed in the Vaishṇava temples. The day of the full moon called the *Mádhava púrṇimá* is also held sacred and assemblies are held at several of the Saiva and Nága temples on this day, such as Pinákeśwara, Gaṇanátha, Bhairava in Phaldakot, Bhagotí in Dhaundyolsyún and Síteśwara, also at Vasukí Nága in Dánpur and Nágadeva in Sálam.

Jeṭh.—The eleventh of the dark half of Jeṭh is called the *Apara ekádaśí* or ' super-excellent eleventh,' the best of all the elevenths of the dark half which are held sacred by the pious. No noted fair takes place on this day and it is merely a nominal festival in these hills. The last day of the dark half is called *Vata-sávitrí amávasyá*, when Sávitrí, the personified form of the sacred *Gáyatrí* verse, is worshipped by a few. The second of the light half of Jeṭh is known as the *Anadhyáya dwitíyá*, and on this day no new task is given by a teacher to his pupils. The tenth of the light half is

called the Jeṭh *Daśahra*, which is generally observed throughout the lower paṭṭis or subdivisions. Special assemblies are held on this day at the temples of Umá at Karnprayág, Uparde at Amel, Bágeśwara, Koṭeśwara and Sítá at Sítábaní in Kota, &c. This Daśahra marks the birth of Gangá, the worship of the Nágas and Mánasa. The eleventh is called the *Nirjalá ekadaśí*, when drinking water is forbidden to those who profess to be devout. The day of the full moon is like all other similar dates observed by plastering the floor with cow-dung and earth and giving presents (*nishrau* or *nirshau*) of rice and money to Bráhmans.

Asáṛh.—The eleventh of the dark half of Asáṛh is known as the *Yoginí ekádaśí*, a nominal feast, only observed by those who have vowed to keep holy every eleventh throughout the year. During this month festivals are held in the temples dedicated to Bhairava and Nágarája in Garhwál. The eleventh of the light half of Asáṛh is known as the *Hari-śayaní ekádaśí*, the day when Vishnu falls asleep, which like the *Hari-bodhiní ekádaśí*, or eleventh of the light half of Kárttik, when Vishṇu awakes from his sleep, is esteemed specially sacred amongst 'elevenths' and is generally observed throughout these districts. The day of the full moon is observed in the same way as in Jeṭh as a domestic festival.

Sáwan or Saun.—The eleventh of the dark half of Sáwan or Saun has the local name *kámiká*, but is merely observed as a day of rest and one of the *ajoṭa* days when the cattle are not harnessed. When the thirteenth of any month falls on a Saturday it is called *Sani trayodaśí* and is held sacred to Siva, no matter in what month or in what half of the month it takes place. Similarly, when the last day of the dark half of the month occurs on a Monday, it is called the *somavatí amávasyá*, which is generally observed as a day of rest and the *śráddha* of ancestors is performed without, however, making the *piṇḍas* as prescribed for the *S'ráddhapaksha* of Bhádo. On this day also an iron anklet called *dhagul* is worn by children to guard them against the evil eye and the attentions of *bhútas* or sprites. The eleventh of the light half is known as the *Putradá ekádaśí*, but has no special importance. On the day of the full moon, after bathing in the morning, Hindus retire to some place near running water and making a mixture of cow-dung and the earth in which the *tulsí* plant has grown, anoint their bodies; then they wash themselves, change their sacrificial threads and perform the ceremony of *Rishi-tarpaṇa* or worship of the seven Rishis or sages. They then bind *rákhis* or bracelets of silk or common thread around their wrists and feed and give presents to Bráhmans. The common name for this festival in Kumaon is *Upa-karma*, equivalent to the *Salauna* or *Rakshábandhana* or *Rákhibandhana* of other districts. On this day festivals take place at the Sun temple in Súi-Bisang, Báráhí Devi at Devi Dhúra and Patuwá in Súí. A commercial fair takes place at Devi Dhúra on the *Sudi púrṇimá*.

Bhádo.—The fourth of the dark half of Bhádo is known as the *Sankashí chaturthí* when Gaṇeśa is worshipped and offerings of *dúb* grass and the sweetmeat called *ladú* composed of sugar and sesamum seed are made. These sweetmeats are here called *modak*, of which ten are usually presented, and of these five belong to the officiating priest and five to the worshipper. This observance is common amongst all Hindus. The eighth of the dark half is the well-known *Janmáshṭamí*, a great festival amongst the Vaishṇavas, held in honour of the birth of Kṛishṇa. The eve of this festival is spent in worship in the temples. Local festivals are also held during this month in honour of Kelu Pír, Gangánátha, Kárttikeya, Dípa Deví and Pushkara Nága. The eleventh of the dark half is known as the *Ajámbiká ekádaśí* and that last day is called the *Kuśávartí amávasyá*, when the *kuśa* grass is collected by Bráhmans for use in their ceremonies. Locally amongst the Tiwári Bráhmans the ceremony of changing the sacrificial thread is performed on the third of the light half of Bhado, which is commonly known as the *Haritálí tritíyá* from the Hasta *nakshatra* or asterism. The fourth is known as the *Gaṇeśa-chaturthí* and is the date of a fair at Thal Kedár in Waldiya and at Dhvajpatikeśwar near Jarkandár in Askot. The fifth, is known as the *Nága* or *Rishi* or *Birura-panchamí*.

Nága-panchamí.—This is the great day on which the serpents are worshipped and the date of the fair in honour of Ugyára Mahárudra at Papoli in Nákura and Karkoṭaka Nága in Chhakháta. Rikheśwar is a title of Siva as lord of the Nágas, a form in which he is represented as surrounded by serpents and crowned with a chaplet of hooded snakes. The people paint figures of serpents and birds on the walls of their houses and seven days before this feast steep a mixture of wheat, gram and a sort of pulse called *gahat* (*Dolichos uniflorus*) in water. On the morning of the *Nága-panchamí* they take a wisp of grass and tying it up in the form of a snake dip it in the water in which the grain has been steeped (*birura*) and place it with money and sweetmeats as an offering before the serpents.

The chief festival, however, in Bhádo is that held on the *Nandáshṭamí* or eighth of the *Sudi* or light half. It is popular all over the uppér paṭṭis (sub-divisions) of the two districts and is the occasion of a great assembly in Almora. Great numbers of kids are sacrificed and occasionally young male buffaloes. At Almora a young buffalo is offered and Raja Bhim Singh, the representative of the Chand Rájas, gives the first blow with a talwár and afterwards the others kill the animal. In several villages this is made the occasion of a cruel custom. The animal is fed for the preceding day on a mixture of *dál* and rice and on the day of the sacrifice is allowed sweetmeats and, decked with a garland

around its neck, is worshipped. The headman of the village then lays a talwár across its neck and the beast is let loose, when all proceed to chase it and pelt it with stones and hack it with knives until it dies. This custom especially prevails in villages where the form Mahisha-mardaní is worshipped, 'she who slew the buffalo-demon Mahisha.' A similar custom, however, called *dhurangí* obtains in the Bhoṭiya parganahs of Kumaon where there is no trace of the buffalo-legend. There, when a man dies, his relatives assemble at the end of the year in which the death occurred and the nearest male relative dances naked with a drawn sword to the music of a drum, in which he is assisted by others for a whole day and night. The following day a buffalo is brought and made intoxicated with bhang and spirits and beaten with stones, sticks and weapons until it dies. It is probable that this custom of slaying the buffalo is an old one unconnected with any Bráhmanical deity. A story fabricated not very long ago in connection with the Nandá temple at Almora is both amusing and instructive as to the growth of these legends. My informant tells how the worship of Nandá at Almora had been kept up ever since it was established there by Kalyán Chand, but that when the British took possession of Kumaon, the revenue-free villages attached to the temple were sequestrated by Mr. Traill.* Three years afterwards (1818) Mr. Traill was on a visit to the Bhoṭiya valley of Juhár, and whilst passing by Nandá-koṭ, where Nandá Deví is supposed to hold her court, was struck blind by the dazzling colour of the snow. The people all told him that unless the worship of the goddess were restored his temporary snow-blindness would remain for ever, and on his promising to this effect, his eyes were opened and healed. In Almora, there is this peculiarity in the worship of Nandá, that two images are made of the stock of the plantain tree and on the morrow of the festival, these are thrown or, as the people say, sent to sleep on a waste space below the fort of Lalmandi (Fort Moira) and thus disposed of.

Durbáshṭamí.—A ceremony known as the *Durbáshṭamí* sometimes takes place on the *Nandáshṭamí* and sometimes on the *Janmáshṭamí* or other holy eighth of this month. On this day women make a necklace of *dúb* grass which they place around their neck and after ablution and worship give it with the *sankalpa* or invocation as a present to Bráhmans. They then wear instead a necklace of silk or fine thread according to their means. They also put on their left arms a bracelet of thread with seven knots known as *ḍor*. Men wear a similar bracelet of fourteen knots on their right arms which is called *ananta*, as they first wear it on the *ananta chatur-*

* On the British conquest in 1815, all claims to hold land free of revenue were examined and in many cases, owing to the difficulty of obtaining satisfactory evidence in support of the claim, considerable delay arose in issuing orders.

daśí or fourteenth of the light half, which is further observed as a festival at Beninága in Baraun, Bhagling in Sor and Chhipula in Askot and also at the temples to Ghaṇṭakarṇa in Garhwál. The eleventh is locally known as the *Párśvaparí ekádaśí* and the twelfth as the Bámaṇ or *Srávaṇa dwádaśi* from the Srávaṇa *nakshatra* or asterism, but both are merely nominal festivals. The day of the full moon is observed as in other months.

S'ráddha-paksha of Asoj.—The entire dark half of Asoj is known as the *S'ráddha-paksha* or fortnight devoted to the repose of the manes of ancestors. It is also called the *Mahálaya párvaṇa śráddha* from the formula used each day in worshipping the manes. The ninth is known as the *S'ráddhiyá navamí* when the ceremonies are performed for a mother. On this day, the children by a legal wife make small balls of cooked rice and the children by a concubine make the same of raw rice ground with water on a stone. These cakes or balls are called *piṇḍa* and are worshipped in remembrance of the deceased. They are then given to a cow to eat or are thrown into a river or on to some secluded waste piece of ground. The practice of making *piṇḍa* of boiled rice is, however, confined to those castes who claim connection with similar castes in the plains and is unknown amongst the Khaśiyas, who make the *piṇḍa* of raw rice as already noticed for the offspring of a concubine. If a father has died his *śráddha* is performed on the same date of the fortnight: thus if he died on the third of Magh *sudi*, his *śráddha* in the *śráddha-paksha* or *kanyágati* will be held on the third, but if he died on the ninth or any succeeding date, if the mother be already dead, as a father's *śráddha* cannot be held after a mother's, the ceremony must be observed on the eighth. In addition to this the anniversary of the death of a father is always separately observed by the better classes and is called '*ekoddishṭa*' or '*ekoddṛishṭa*' when 'he alone is looked at' or is made the object of worship. If he died during the *śráddha-paksha*, the day is called '*ekoddishṭa khyáta śráddha*,' and though it falls on the ninth or succeeding day is observed as the anniversary. The last day of the dark half is called *Amávasyá śráddhiyá*, when the names of all ancestors are mentioned and worshipped, but *piṇḍas* are made and offered only for the three male paternal ancestors, father, grandfather and great-grandfather. The three ascending cognates and agnates are all honoured on this day, which is the only one observed by Doms. The *śráddha* of girls who die before marriage is never made, and of boys only if they have been invested with the sacrificial thread. The *śráddha* of a girl who has married is made by her husband's brother's family, if she dies childless her husband's brother's son, or if her husband has married twice and has offspring, her step-son *(sautela)* performs the ceremony. In default of these, the elder or other brother of the husband will officiate; her own brothers never can take part in any ceremony connected

with a sister who married. The eleventh of the *śráddha-paksha* is known as the *Indriyá ekádaśí*, but has no particular observances attached to it apparently.

Asoj sudi.—The first nine nights of the light half of Asoj called the *Asoj navarátri* are, like the first nine nights of Chait, especially devoted to the worship of Sakti. The first day is called *Devi-sthápana*, on which the idol is set up and the preparations are made. The eighth is the '*mahásht*ami' or great eighth, when the pious fast all day and make ready for the great or last day, when kids are sacrificed and the proceedings continue during the whole night. The tenth of the light half of Asoj is here called the *Vijaya-daśamí* or the tenth of victory, and on this day a festival is held to commemorate the commencement of Rámá's expedition to Ceylon (Lanka) for the release of Sítá. It is locally known as *Páyata* or simply *Pait*, from the well-known sweetmeat *petha* which forms an important item of the feast given to friends and relatives on this day. Some also now pay honour to the young green sprouts of the more useful crops, such as wheat, gram, rape, as well as on the *Karka sankránta*, when the custom is universally observed. The village gods Goril and Ghatku or Ghatotkacha have festivals on the *mahásht*ami. The eleventh is known as the *Pápánkuśa-ekádaśí* or eleventh of the *ankuśa* (elephant goad) of sin, and in some copies as *Párśvaparí*. The day of the full moon is called *Kojágarí*, and from this day the gambling of the Diwálí commences.

Kárttik.—The eleventh of the dark half of Kárttik is known as the *Ráma ekádaśí* or eleventh of Ráma and Lakshmí. The entire dark half is called the *Dípa-paksha* or 'fortnight of lamps.' The Pádma-Puráṇa alludes to the eleventh of Ráma as appropriate to the gift of lighted lamps as well as to the *Naraka-chaturdaśí* or fourteenth and fifteenth. The thirteenth is set apart for the gift of lamps to Yama, and flowers should be offered on the two following days, when bathing also is enjoined. The *Dipáwalí amávasyá* or last day of the dark half is known as the *Sukharátri* or happy night which Vishṇu passed in dalliance with Lakshmí and also as the *Diwálí*. Women take part in the observances of the night and some keep the previous day as a fast and devoutly prepare the materials for the night's worship when none are allowed to sleep. Even the lighting of lamps for the purpose of gambling in any place dedicated to Vishṇu is considered to be a pious and meritorious act at this season. The Vaishṇava friars known generically as Bairágis minister at most of the Vaishṇava shrines and festivals and acknowledge the spiritual supremacy of the chief of the S'riranga temple and *maṭha* near Trichinopoly in the Madras Presidency.

The *Kárttika Máhátmya* of the Pádma-Puráṇa is devoted to a de-

scription of the rites and ceremonies to be observed during Kárttik. "In this month whatever gifts are made, whatever observances are practised, if they be in honour of Vishṇu, are sure of obtaining the end desired and realizing an imperishable reward." The first day of the light half is devoted to the memory of the Daitya Rája Bali who was subdued by Vishṇu in his dwarf incarnation and to Kṛishṇa or Kanhaiyá as Gobardhan. When Bali was sent to Pátála, he was allowed as a boon to have this day held sacred in his honour. The door-step is smeared with cow-dung and the images of Bali and his family are rudely drawn thereon and receive domestic worship. The second is known as the *Yama-dwitíyá* when Yama came down to visit his sister Yamuná and she received the boon that all brothers who visited sisters on that day and interchanged presents should escape hell. On the eighth a commercial fair is held at Askot. The ninth is known as the *Kushmáṇḍa-navamí* when pumpkins are offered to Devi, and on the eleventh called the *Hari-bodhiní*, the waking of Vishṇu from his periodical slumbers, is celebrated. The fourteenth is known as the *Vaikuṇṭha-chaturdaśí*, for he who dies on this day goes straight to the paradise of Vishṇu. Noted festivals are held on the Vaikuṇṭha fourteenth at Kamaleśwara in Srinagar and Malik Arjun in Askot. The day of the light half or *púrṇimá* is like the *púrṇimá* of Baiśákh, a great day for bathing, and special assemblies are then held at the temples of Pinákeśwara, Gaṇanátha, Síteśwara, Vásuki Rája and Nágadeva Padamgír.

Mangsír.—The eleventh of the dark half of Mangsír is known as the *Utpatti-ekádaśí*, but is not particularly observed. The eleventh of the light half is called the *Moksha-ekádaśí* and has some local celebrity. The twelfth or *Bárábí dwádaśí* is so called in remembrance of Vishṇu's boar incarnation. The day of the full moon has no peculiar observance attached to it. The only other festivals during this month are those held at the harvest feasts. No important agricultural operation takes place without the intervention of some religious observance. An astrologer is called in who fixes the auspicious day, generally with reference to the initial letter of the name of the owner of the field, but if this does not suit, his brother or some near relation whose name is more convenient for the purpose takes the owner's place in the ceremony. Tuesdays and Saturdays are generally considered unlucky days. On the day fixed for the commencement of ploughing the ceremonies known as *kudkhyo* and *halkhyo* take place. The *kudkhyo* takes place in the morning or evening and begins by lighting a lamp before the household deity and offering rice, flowers and balls made of turmeric, borax and lemon-juice called *pitya*. The conch is then sounded and the owner of the field or relative whose lucky day it is takes three or four pounds of seed from a basin and carries it to the edge of the field prepared for its reception. He then

scrapes a portion of the earth with a *kuṭhala* (whence the name *kudkhyo*) and sows a portion. One to five lamps are then placed on the ground and the surplus seed is given away. At the *halkhyo* ceremony, the *pitya* are placed on the ploughman, plough and plough-cattle, and four or five furrows are ploughed and sown and the farm-servants are fed. The beginning of the harvest is celebrated by the *kalái*, when ten or twelve ears of the new grain are brought from the fields and offered to the household deity. Pots of cow-dung are placed over the doorway and near the household deity, and four ears crossed two by two are placed in them. After the harvest is over one or two *súrpas* or sieves of grain are distributed amongst the servants. All these ceremonies are accompanied by simple prayer for prosperity in general and on the work about to be performed in particular.

Pús. Mán.—The eleventh of the dark half of Pús is called the *Saphala ekádaśí*, and the eleventh of the light half is known as the *Bhojaní ekádaśí*. The fourth of the dark of half of Mán or Mágh is known as the *Sankashṭa chaturthí*, which like the similarly named day in Bhádo is sacred to Gaṇeśa. The eleventh is the *Shaṭ-tila ekádaśí* when the devout are allowed but six grains of sesamum seed as food for the whole day. The fifth of the light half called the *S'rí* or *Vasanta-panchamí* marks in popular use the commencement of the season of the Holí. The name '*S'rí*' is derived from one of the titles of Lakshmí, the goddess of wealth and prosperity, and according to some includes Sarasvatí, the goddess of learning. Even in Kumaon where the customs and ideas of the plains have not yet thoroughly permeated the masses, amongst some classes, young children beginning to learn are taught to honour Sarasvatí on this day, whilst the Baniyá worships his scales, the soldier his weapon, the clerk his pen, the ploughman his plough, and others the principal emblem of their professions or callings. The name *Vasanta-panchamí* connects the festival with the advent of spring and the young shoots of barley, at this time a few inches in length, are taken up and worn in the head-dress. The *Vasanta-panchamí* corresponds closely with the old Latin feast, the fifth of the ides of February which was fixed as the beginning of spring in the Roman calendar. On this day, people wear clothes of a yellow colour in honour of spring and indulge in feasts and visiting their friends. From the fourth to the eighth of the light half of Mágh festivals are held which are known collectively as the *Pancha parva*: they are the *Gaṇeśa-chaturthí*, the *Vasanta-panchamí*, the *Súrya-shashṭhí*, the *Achalá saptamí* and the *Bhíshmáshṭamí*. The *Gaṇeśa-chaturthí* is observed by few in Kumaon, but the *Vasanta-panchamí* is held in honour all over the two districts. The *Súrya-shashṭhí* is held on the same day as the *Sítala-shashṭhí* of the plains, but has no connection with it. Here

it is observed by the Sauras only or occasionally old widows and others similarly situated who worship the sun on this day. The only noted festival in connection with it is that at the temple of the sun at Paban or Pabhain in Bel. The *Achalá saptamí* or "immoveable seventh," so called because it is said to be always held sacred, is seldom observed here. It is also called the *Jayantí-saptamí* or 'seventh of victory,' and festivals are held on this day at the Kamaleśwara temple in Śrinagar and the temple to Jayantí at Jayakoṭ in Borárau. The *Bhíshmáshṭamí* seems to be altogether unobserved, if we except the entirely local ceremonies held in some few places and utterly unknown to the people at large. The eleventh is known as the *Bhíma ekádaśí*, and this and the full moon are very seldom observed.

Phágun. Śivarátri.—The eleventh of the dark half of Phágun is called the *Vijaya-ekádaśí* or 'eleventh of victory.' The fourteenth is everywhere sacred to Śiva. This is the day when all sins are expiated and exemption from metempsychosis is obtained. It is the anniversary of the apparition of the ling which descended from heaven to confound the rival disputants, Brahma and Vishṇu, a scene which is described at length in the Lainga Puráṇa.* The day preceding is devoted by the pious and educated to fasting, and all night long the deity is worshipped, and it is not until ablutions are performed next morning and offerings are made to the idol and the attendant priests, that the worshippers are allowed to eat. The day is then kept as a holiday. In the great Śaiva establishments the ceremonies are conducted with great splendour and are held to be especially sacred on this day, more particularly in those which were established before the Muhammadan invasion of India. These temples as enumerated by the local pandits are as follows:—(1) Rámeśwara near Cape Komorin; (1) Kedárnátha in Garhwál; (3) Mahákála in Ujjain; (4) Somanátha in Gujrat; (5) Mallikárjuna in the Karnatic; (6) Bhíma Sankara near Púna; (7) Oṃkáranátha on the Nerbudda; (8) Viśvanátha in Benares; (9) Bhuvaṇeśwara in Orissa; (10) Vaidyanátha in Bombay; (11) Bágeśwara in Kumaon and (12) Jágeśwara in Kumaon. As a rule, however, there is only a single service in some temple or a ling is made of clay and worshipped at home. The elaborate ritual laid down in the *Várshika pustaka*, the authority in these hills is very seldom observed: the mass of the people neither now understand it nor have they the means to pay the fees of the hereditary expounders. The ordinary ceremonies include the offering of rape-seed and uncooked rice with flowers and water, and then the mystical formula known as *práṇáyáma* which is explained hereafter.

At the *mahápújá* on the Śivarátri at Jageśwara the idol is bathed in

* Translated in Muir, IV., 388.

succession with milk, curds, ghi, honey and sugar: cold and hot water being used alternately between each bathing. Each bathing has its appropriate invocation, prayer and offering which are in all respects the same as those prescribed in the plains.* Another form of worship is the '*jap*' or recitation of the one hundred and eight names of S'iva, such as Rudra, Iśána, Hara, Paśupati, &c. These are counted off on a rosary made of the seeds of the *rudráksha* (*Abrus precatorius*). As a rule, however, few remember this litany and the worshipper is satisfied by repeating a single name as often as he cares, thus "*Oṃ śiváya oṃ*" or "*Oṃ mahádeo*" is the favourite ejaculation of the '*jap*' in Kumaon though one occasionally hears from pilgrims from the plains '*Har, Har Mahádeo, bam Mahádeo.*' The leaves of the *bel* (*Ægle marmelos*) and the flowers of the *datúra* (*Datura alba*), the *kapúr nali* or *kapúr nai* (*Hedychium spicatum*), the *játi* or *jai* (*Murraya exotica ?*) and the rose are specially sacred to S'iva and form a part of the *argha* or offerings made during his worship. There can be no doubt but that the present system of S'aiva worship though popular and universal is of modern origin, and on this point we may cite the testimony of Professor Wilson :†—"Notwithstanding the reputed sanctity of the *S'ivarátri*, it is evidently sectarial and comparatively modern, as well as a merely local institution, and consequently offers no points of analogy to the practices of antiquity. It is said in the *Kalpa Druma* that two of the mantras are from the Ṛig Veda, but they are not cited, and it may be well doubted if any of the Vedas recognise any such worship of S'iva. The great authorities for it are the Puráṇas, and the Tantras; the former—the S'aiva, Lainga, Pádma, Mátsya and Váyu—are quoted chiefly for the general enunciations of the efficacy of the rite, and the great rewards attending its performance: the latter for the mantras: the use of mystical formulæ, of mysterious letters and syllables, and the practice of *Nyása* and other absurd gesticulations being derived mostly, if not exclusively, from them; as the *Iśána Saṃhitá*, the *S'iva Rahasya*, the *Rudra Yámala*, *Mantra-mahodadhi* and other Tántrika works. The age of these compositions is unquestionably not very remote, and the ceremonies for which they are the only authorities can have no claims to be considered as parts of the primitive system. This does not impair the popularity of the rite, and the importance attached to it is evinced by the copious details which are given by the compilers of the *Tithi-Tattwa* and *Kalpa Druma* regarding it and by the manner in which it is observed in all parts of India."

* See Wilson, II., 214: the prayers there given are paraphrased in the *Várshika pustaka*.

† *Ibid.*, 219.

Gosáins.—The Gosáins* founded by S'ankara Áchárya are still a powerful body in these hills. S'ankara Áchárya had four principal disciples who are usually named Padmapáda, Hastámalaka, Sureśvara or Mandana, and Troṭaka. Of these the first had two pupils, Tírtha and Áśrama; the second had also two, Vana and Araṇya; the third had three, Sárasvatí, Purí and Bháratí, and the fourth had three, Gír or Giri, Párvata and Ságara. These pupils became the heads of the order of Daśanámí Daṇḍins or 'ten-named mendicants,' and any one joining the fraternity adopts one of the names. Formerly all supported themselves by alms and were celibates. Now some have married and become householders or have taken to trade or arms as a profession and are not acknowledged as brethren except perhaps in western India. The Gosáins proper are called Daṇḍins from the *daṇḍa* or staff carried by them in their travels. They are ruled by an assembly called the Daśanáma, composed of representatives of the ten divisions which has complete control over all the *maṭhas* of the order. On the death of a Mahant his successor is usually elected by the members of the *maṭha* to which he belonged or, in some cases, the *chela* or pupil succeeds. The chief *maṭha* of the order represented in Garhwál is at Sringerí on the Tungabhadra river in the Madras Presidency. They serve at Rudranátha, Kalpeśwara, Kamaleśwara, Bhil-kedár, and indeed most of the principal temples dedicated to S'iva.

Jángamas.—The Jángamas or Lingadháris, so called from their wearing a miniature linga on their breast or arm, acknowledge the spiritual supremacy of Basava, minister of Bijjala Deva Kalachurí Rája of Kalyána and who murdered his master in 1135 A. D. Basava wrote the Básava-Puráṇa and his nephew, the Channa-Básava Puráṇa, which are still the great authorities of the sect. The name Basava is a Kánarese corruption of the Sanskrit '*vṛishabha*,' and the Básava-Puráṇa is written in praise of the bull Nandí, the companion and servant of S'iva. The Jángamas style themselves Puritan followers of S'iva under the form of a linga and call all others idolators. They say that they reverence the Vedas and the writings of S'ankara Áchárya, but they reject the Mahábhárata, Rámáyaṇa and Bhágavata as the invention of Bráhmans. They consider both S'ankara Áchárya and Basava to have been emanations of S'iva. Basava himself was a S'aiva Bráhman and devoted himself to the worship of S'iva under the form of a linga as the one god approachable by all. He denounced the Bráhmans as worshippers of many gods, goddesses, deified mortals and even of cows, monkeys, rats, and snakes. He denied the use of fasts and penances, pilgrimages, sacrifices, rosaries and holy-water. He set aside the Vedas as the supreme authority and taught that all

* The name is derived according to some from '*go*,' passion, and '*swámí*,' master: he who has his passions under control.

human beings are equal, and hence men of all castes and even women can become spiritual guides amongst the Jángamas. Marriage is imperative with Bráhmans, but permissive only with the followers of Basava. Child-marriage is unknown and betrothal in childhood unnecessary. Polygamy is permissible with the consent of a childless wife. A widow is treated with respect and may marry again, though whilst a widow she may not retain the jacket, perfumes, paints, black glass armlets, nose and toe rings which form the peculiar garb of the married woman. A Jángam always returns a woman's salutation and only a breach of chastity can cause her to lose her position. The Jángamas are also call Víra Saivas to distinguish them from the Árádhyas, another division of the followers of Basava who call themselves descendants of Bráhmans and could not be induced to lay aside the Bráhmanical thread, the rite of assuming which requires the recital of the *gáyatrí* or hymn to the sun: hence the Jángamas regard this section as idolators and reject their assistance. Those who totally reject the authority of Bráhmans are called Sáurányas and Viśeshas. The Sámánya or ordinary Jángama may eat and drink wine and betel and may eat in any one's house, but can marry only in his own caste. The Viśesha is the guru or spiritual preceptor of the rest. The lesser vows are addressed to the linga, the guru and the Jángama or brother in the faith. The linga represents the deity and the guru he who breathes the sacred spell into the ear and makes the neophyte one with the deity: hence he is reverenced above the natural parents. The lingas in temples are fixed there and therefore called *sthávira*: hence the lingas of Basava are called *jángama* or able to move about, and the followers Jángamas or living incarnations of the linga. The Árádhyas retain as much of the Bráhmanical ceremonial as possible, they look down on women and admit no proselytes, they call themselves Vaidikas and say that the Jángamas are Vedabáhyas. The latter declare that every one has a right to read the Vedas for himself and that the Árádhyas are poor blind leaders of the blind who have wrested the scriptures to the destruction of themselves and others.

The Jángama worships Śiva as Sadáśiva, the form found in Kedár, who is invisible, but pervades all nature. By him the linga is reverenced as a reliquary and brings no impure thought. He abhors Máyá or Kálí who is one with Yona, and is opposed to licentiousness in morals or manners. He aims at release from fleshly lusts by restraining the passions; he attends to the rules regarding funerals, marriage and the placing of infants in the creed, and is, as a rule, decent, sober and devout. Burial is substituted for cremation and Bráhmans are set aside as priests. The Víra-S'aivas illustrate their creed by the following allegory:—'The guru is the cow whose mouth is the fellow-worshipper and whose udder

is the linga. The cow confers benefits by means of its udder, but this is filled through the mouth and body, and therefore if a Víra-S'aiva desires the image to benefit him, he must feed the mouth, or in other words sustain and comfort his fellow-worshippers, and then the blessing will be conveyed to him through the teacher.' When the Bráhmanical S'iva is mentioned in their books it is only to show that the true Víra-S'aivas are more than a match for the Bhú-suras or gods of the earth as the Bráhmans style themselves. The ordinary S'aiva temples are in some cases served by orthodox Smárta (S'aiva) Bráhmans. The Jángamas still serve some of the principal temples in Garhwál.*

Kánphaṭas.—The Kánphaṭa Jogís conduct the worship in all the Bhairava temples that are not ministered to by Khaśiyas. Their principal seat is at Danodhar on the edge of the Ran of Kachh about twenty miles north-west of Bhúj in the Bombay Presidency. They wear brick-dust coloured garments and are remarkable for the large earrings of rhinoceros horn, agate or gold worn by them and from which they are named. They are very numerous in these hills and possess several large establishments. They follow the Tántrika ritual, which is distinguished by its licentiousness for both the linga and the yona are worshipped by them, and they declare that it is unnecessary to restrain the passions to arrive at release from metempsychosis. They are the principal priests of the lower S'akti forms of Bhairava and even of the village gods, and eat flesh and drink wine and indulge in the orgies of the left-handed sect. Departing from the original idea of the female being only the personified energy of the male, she is made herself the entire manifestation and, as we shall see in the case of Durgá, receives personal worship, to which that of the corresponding male deity is almost always subordinate. The S'áktas are divided into two great classes, both of which are represented in these districts, the Dakshiṇáchárís and Vámáchárís. The first comprise those who follow the right hand or open orthodox ritual of the Puráṇas in their worship of S'akti, whilst the latter or left-hand branch adopt a secret ceremonial which they do not care openly to avow. The distinction between the two classes is not so apparent in the mass of the S'áktas

* The chief authorities for the Lingáyat system are :—

The Básava-Puráṇa of the Lingáyats translated by the Rev. G. Würth, J. B. B. R. A. S., VIII., 63.

The Channa-Básava Puráṇa translated by the same. *Ibid.*

The creeds, customs and literature of the Jángamas, by C. P. Brown, M. J. L. S. XI. 143 : J. R. A. S., V *n. s.* 141.

The Básava-Puráṇa, the principal book of the Jángamas, by the same. *Ibid.*, XII. 193.

On the Gosáins by J. Warden, M. J. L. S. XIV. 67.

Castes of Malabar. *Ibid.*, 1878, p. 172.

here as amongst the extreme of either class. The more respectable and intelligent, whatever their practice in secret may be, never profess in public any attachment to the grosser ceremonial of the left-hand S'áktas, and it is only fair to say that they generally reprobate it as opposed to the spirit of the more orthodox writings. As a rule, the worshipper simply offers up a prayer and on great occasions presents one, two, five or eight kids, which are slaughtered and afterwards form the consecrated food of which all may partake. The left-hand ritual is more common in Garhwál, where there are some sixty-five temples dedicated to Nágarája and Bhairava and some sixty dedicated to Bhairava alone, whilst there are not twenty temples to these forms in Kumaon. Nágarája is supposed to represent Vishṇu, and Bhairava is held to be a form of S'iva, and these with their personified energies are considered present in each of these temples, though in the actual ceremony the worship is chiefly directed to the female form of S'iva's S'akti. In all the rites, the use of some or all the elements of the five-fold *makára*, *viz.*, *matsya* (fish), *máṃsa* (flesh), *madya* (wine), *maithuná* (women) and *mudrá* (certain mystical gesticulations), are prescribed. Each step in the service is accompanied by its appropriate mantra in imitation of those used with the five-fold offerings of the regular services. In the great service of the *Srí Chakra* or *Púrṇábhisheka*,* the ritual, as laid down in the *Daśakarma*, places the worshippers, male and female, in a circle around the officiating priest as representatives of the Bhairavas and Bhairavís. The priest then brings in a naked woman, to whom offerings are made as the living representative of S'akti, and the ceremony ends in orgies which may be better imagined than described. It is not therefore astonishing that temple priests are, as a rule, regarded as a degraded, impure class, cloaking debauchery and the indulgence in wine, women and flesh under the name of religion. Garhwál is more frequented by pilgrims and wandering religious mendicants, and this is given as a reason for the more frequent public exhibition of their ceremonies there. In Kumaon the custom exists, but it is generally observed in secret, and none but the initiated are admitted even to the public ceremonies. The Tantras prescribe for the private ceremony that a worshipper may take :—"a dancing-girl, a prostitute, a female devotee, a washerwoman or a barber's wife," and seating her before him naked, go through the various rites and partake with her of the five-fold *makára*.

Sacrifices.—The *bali-dána* or oblation when offered by Vaishṇavas consists of curds, grain, fruits and flowers, but when offered by the S'aiva S'áktas here usually assumes the form of living victims, the young of

* See for further details Wilson, I., 258, and Ward, III, 194, ed. 1822: the descriptions there given fairly represent the practice in the hills.

buffaloes or more generally of goats. At Purṇagiri in Tallades, Hát in Gangoli and Ranchula Koṭ in Katyúr, the consort of S'iva, in her most terrible form, has attained an unenviable notoriety as having been in former times appeased by human sacrifices. In the neighbouring country of Nepál,* it is recorded that the custom of offering human sacrifices to Bachhlá Devi, another form of Kálí, was introduced by S'iva-deva-varma, and that when one of his successors, Viśva-deva-varma, considered it a piece of great cruelty and desired to abolish it " Nara-śiva made a great noise. Whereupon the Rája went to see what was the matter and the Nara-śiva came to seize him. The Rája, being pleased at this, gave him a large *jágír* which remains to the present day." In Bhavabhúti's charming drama of Málatí and Mádhava we have an account of the attempt made by Aghoraghaṇṭa to offer Málatí as a sacrifice to Chámuṇḍá Devi when she is rescued by Mádhava.† In the collection of legends known as the Kathá-sarit-ságara frequent mention is made of the sacrifice of human victims by the barbarous tribes inhabiting the forests and mountains and we know that up to the present day the practice has existed amongst the wild tribes in Khondistán. In the Daśa Kumára Charitra, also, we are told of Praháravarma, Rája of Mithila, being attacked by the S'avaras and losing two of his children who were about to be offered by the barbarians to Chaṇḍí Devi when they were fortunately rescued by a Bráhman. The Kálika Puráṇa, too, gives minute directions for the offering of a human being to Kálí, whom, it is said, his blood satisfies for a thousand years. Both at Purṇagiri and Hát a connection and oneness with the great Kálí of Calcutta is asserted and cocoanuts are much esteemed as a subsidiary oblation. In the latter place the sacrificial weapon used in the human sacrifices is still preserved.‡

Holí.—The Holí commences on the eighth or ninth and ends on the last day of Phálgun *Sudi*, locally known as the *chharari* day. Some derive the name Holí from the demon Holiká, who is one with Pútana; but the *Bhavishyottara Puráṇa*, which has a whole section devoted to this festival, gives a different account which may be thus briefly summarised :—In the time of Yuddhishthira there was a Rája named Raghu who governed so wisely that his people were always happy, until one day the Rákshasí Dundhá came and troubled them and their children. They

* Wright's Nepal, 126, 130 : Sivadeva lived about the tenth century.

† Wilson, XII, 58.

‡ Those who are desirous of investigating the subject of human sacrifices further are referred to Wilson's works, I, 264 ; II, 247 ; III, 353 : IV., 143 ; Max Müller's History of ancient Sanskrit Literature, 408 : Muir's Sanskrit Texts, I., 355 : II., 184 ; IV., 289 : Wheeler's History of India, I, 403 : Wilson's India, 68, and Colebrooke's Essays 34.

prayed the Rája to aid them and he consulted the Muni Nárada, who directed them to go forth in full confidence on the last day of the light half of Phálgun and laugh, sport and rejoice. Then they should set up a bonfire and circumambulate it according to rule, then every one should "utter without fear whatever comes into his mind. In various ways and in their own speech let them freely indulge their tongues and sing and sing again a thousand times whatever songs they will. Appalled by those vociferations, by the oblations to fire and by the laughter of the children," the Rákshasí was to be destroyed. "Inasmuch as the oblation of fire (*homa*) offered by the Bráhmans upon this day effaces sin and confers peace upon the world (*loka*), therefore shall the day be called *holiká*." The Kumaonis take full advantage of the license thus afforded and under the influence of *bhang* proceed from village to village singing obscene songs and telling stories. The red-powder or *gulál* which is used in the sports during the festival is made from the flowers of the rhododendron. Although preparations commence on the eighth or ninth, the real festival does not begin until the eleventh, known as the *chirbandan* day, or *amardakí ekádaśí*. On this day, people take two small pieces of cloth from each house, one white and the other coloured, and after offering them before the S'akti of Bhairava make use of them thus:—A pole is taken and split at the top so as to admit of two sticks being placed transversely at right angles to each other and from these the pieces of cotton are suspended. The pole is then planted on a level piece of ground, and the people, singing the Holí songs in honour of Kanhaiyá and his Gopís, circumambulate the pole and burn it on the last day. This ceremony is observed by the castes who assume connection with the plains castes, but the lower class of Khaśiyas, where they observe the festival, simply set up the triangular standard crowned by an iron trident, the special emblem of Paśupati, which they also use at marriage ceremonies. The Holí is chiefly observed in the lower paṭṭis and is unknown in the upper hills. The *Tíká* holí takes place two days after the *chhararí* or last day of the Holí, when thankofferings are made, according to ability, on account of the birth of a child, a marriage or any other good fortune. The expenses of these festivals are usually met by a cess on each house which is presented to the officiating Bráhman for his services, and he, in return, gives to each person the *tilak* or frontal mark, made from a compound of turmeric. The practice of the orthodox and educated in no way differs from that current in the plains. The Holí is clearly another of those non-Bráhmanical ceremonies connected with the montane Páśupata cult which have survived to the present day.

Festivals regulated by the solar calendar.—Each *sankránta* or the passage of the sun from one constellation into another is marked by festi-

vals. Most of the Bhairava temples in Garhwál and even such as Narmadeśwara, Vṛiddha Kedára and Náráyaṇa have special assemblies on every *sankránta* throughout the year, whilst others hold special services only on particular *sankrántas*, such as the Bikh, Mekh and Makar. Generally the festivals of the village deities as well as all civil duties and engagements are regulated by the calendar for the solar year.

Mín sankránta.—The *Mín* or *Chait sankránta* is not generally observed; but on the following day, girls under nine years of age and boys who have not yet been invested with the sacrificial thread (*janeo*) visit their relations, to whom they offer flowers and smear rice coloured with turmeric (*haldú*) on the threshhold of their doors: hence the name *Halduwá sankránta*. In return, the children receive food and clothing. The low castes Hurkiyá and Dholí, the dancers and musicians of the hills, also, go about from village to village during the whole of this month singing and dancing and receive in return presents of clothes, food and money.

Bikh sankránta.—The *Mekh* or *Baiśákh sankránta* is also called the *Vishapadi*, *Bikhpadi*, *Vijoti*, *Vikhoti* or *Bikh sankránta*. On this day, an iron rod is heated and applied to the navels of children in order to drive out the poison (*bikh*) caused by windy colic and hence the local name *Bikh sankránta*. It is a great day of rejoicing for both Saivas and Vaishṇavas and fairs are held at the shrines of Umá at Karṇaprayág, Síteśwara in Kota, Tunganátha, Rudranátha, Gaurí, Jwálapá, Kálí, Chaṇḍiká, &c., as well as at Badrináth, Vishṇuprayág, Dhyánbadrí and the temples of Náráyaṇa and Ráma. Most of the more important temples have special services on the *Bikh* and *Makar sankrántas*. The latter represents the old computation by which the entrance of the sun into the sign of Capricorn was considered the commencement of the new year and the former the new system by which the entrance of the sun into the sign *Mesha* or Aries begins the new year: hence both days are held sacred throughout both districts. I have not noticed that any special festival is held on the *Brish* or Jeṭh *sankránta* or on the *Mithun* or Asáṛh *sankránta* except one, on the latter date, at the Kailás hill above Bhím Tál, though, as already noted, there are numerous temples where services are held on every *sankránta* throughout the year.

Kark sankránta. Bagwálí.—The *Kark sankránta* is known also as the *Harela*, *Hariyálo* or *Haryáo sankránta* from the following custom:—On the 24th Asáṛh, the cultivators sow barley, maize, pulse (*gahat*) or mustard (*lai*) in a basket of earth and on the last day of the month, they place amidst the new sprouts small clay images of Mahádeva and Párvatí and worship them in remembrance of the marriage of those deities. On the following day or the *Kark sankránta*, they cut down the green stems

and wear them in their head-dress and hence the name *Harela*. The *Kark sankránta* was the great day of the *bagwálí* or stone-throwing festival for Chamdyol in Paṭṭi Gumdes, Rámgár in Paṭṭi Rámgár, at the Náráyaní temple in Siloti and at Bhím Tál in Chhakháta. It was also held at Debí Dhúra on the full moon of S'aun, at Champáwat, Patuá in Súi and Siyál De Pokhar in Dwára on *Bhayya dúj* or Kárttik Sudi 2nd. The *bagwálí* was known as the *siti* in Nepál* and is said to have been established there at a very early period by Rája Guṇakáma Deva, who received in a dream a command to that effect from S'rí Skandaswámí, the god of war. He appears to have revived the custom of the *kilátarí* game which was introduced by Bhuktamána, the founder of the Gwála dynasty, as a portion of the games held in the S'leshmántak forest, sacred to the Paśupati form of S'iva. Guṇakáma drew up strict rules for the conduct of the fray which were at first carried out with the greatest rigour, and the prisoners captured on either side were offered as sacrifices to Devi. The game was played from Jeṭh to Siti-shashṭi, and though the murder of the prisoners soon fell into abeyance, many grievous accidents occurred until at length the custom was abolished by Sir Jung Bahádur on account of Mr. Colvin, the Resident, having been struck by a stone whilst looking on. In these districts it was the custom for several villages to unite and defend the passage across a river against a similar force from the other side. As the hill-men are good slingers injuries occurred and even fatal accidents, so that the custom was prohibited, and now the combatants amuse themselves merely by pelting stones at some boulder or conspicuous tree. In Juhár, the Bhoṭiyas offer a goat, a pig, a buffalo, a cock and a pumpkin† which they call *pancha bali* to the village god, on the *kark sankránta*. The day is given up to feasting and drinking spirits and towards evening they take a dog and make him drunk with spirits and bhang or hemp, and having fed him with sweetmeats, lead him round the village and let him loose. They then chase and kill him with sticks and stones and believe that by so doing no disease or misfortune will visit the village during the year. The festivals on this day at Báleśwar in Chárál, and at Dhernáth in Súi Bisang, are attended by all the neighbouring villagers.

Bhado sankránta.—The *Siṃha* or *Bhádo sankránta* is also locally known as the *Ghí* or *Ghyúshgyán sankránta*, because on this day even the poorest classes eat *ghi* or clarified butter, and has the name *Walgiya* because curds and vegetables are then offered by all persons to those in authority over them. There is a fair on this day at the temple of Vaishṇaví Devi at Naikuni in Seti.

* Wright, 108, 156.

† *Kumila or petha*, Cucurbita pepo (Roxb.).

Kanyá sankránta.—The *Kanyá* or *Asoj sankránta* is also locally known as the *Khataruwá sankránta* from the people gathering hay and fuel on this day. From a portion of these firstfruits after the rains a bonfire is made into which the children throw cucumbers and flowers and make money by singing and dancing. The following story is told in explanation of this custom :—" In former days one of the Chand Rájas sent a force to invade Garhwál and gave strict injunctions to his general to convey speedily the news of any victory that should be gained. The general told the Rája that when he saw the hills around blazing with bonfires he might know that Garhwál had been conquered, and for this purpose heaps of fuel were collected on all the higher peaks along the line of march and placed under charge of guards. The object of the expedition was attained on the *Kanyá sankránta* and the fuel was fired and peak answered peak until in a few hours a bonfire was blazing on every hill from Garhwál to Almora. The Rája was so pleased at the success of his troops and the rapidity with which the news of the victory was communicated that he gave orders to continue the custom on each anniversary." Hence this custom has been observed ever since in Kumaon, but not in Garhwál.

Makar sankránta.—The *Makar* or *Mágh sankránta* is also known as the *Ghugutiyá*, *Phúl*, and *Uttaráyiṇí* or *Uttarainí sankránta*. The name '*Ghugutiyá*' is given from the small images of flour baked in sesamum oil or ghí and made to resemble birds which are strung as necklaces and placed around the necks of children on this day. On the morrow or the second day of Mágh the children call the crows and other birds and feed them with the necklaces and eat a portion themselves. The name '*Phúl*' *sankránta* is derived from the custom of placing flowers, especially those of the rhododendron, at the threshhold of friends and relations who, in return, give presents of rice and grain. The name '*Uttaráyiṇí*' is derived from its being the beginning of the winter solstice according to the Hindú system and, as with us, commences with the entry of the sun into the sign Capricorn. The name '*Makara*' is the Hindú equivalent for the constellation corresponding to Capricorn and is represented by a figure half fish and half goat. The whole of Mágh is specially devoted to the worship of Vishṇu and the sun, and according to the Pádma-Puráṇa bathing during this month is particularly efficacious. The great commercial fairs at Bágeśwar and Thal Baleśwar are held on this day. Amongst the Sikhs, the *Makar sankránta* is the occasion of a fair at Rikhikeś on the Ganges connected with the Dehra establishment.

Conclusion.—The general result of our brief survey of the religious festivals observed in Kumaon and Garhwál shows that even at the present day, they are in no sense of Bráhmanical origin. Excluding those clear-

borrowed from the plains and followed almost entirely only by the educated and wealthier classes, the really popular festivals are those held at the two harvests, those in honour of the Nágas at the Jeṭh Daśahra and Nágapanchamí, the great S'aiva S'akti observances on the Chait and Asoj *navarátris* and the festivals in honour of Bhairava, Nágarája, and the rural deities Goril, Ghaṇṭakarṇa, &c. The sacrifice of kids is a part of almost all the ceremonies on these occasions, young male buffaloes are also offered, and in former times human sacrifices were not uncommon at the temples of the dark form of the consort of S'iva. All these facts mark the non-Bráhmanical origin of the existing form of worship. The Khaśiyas of Kumaon possess many traits in common with the Dasyus of the Vedas, practically they have no Vedas, they perform no Vaidik ceremony and their sacrifices are not in accordance with any Vaidik ritual, their caste observances and rules as to eating and drinking are not on the same strict lines as those observed by the Hindús of the plains, and it was these distinctions that placed them fifteen hundred* years ago outside the pale of the twice-born, and which even under more liberal influences now outcastes them.

Domestic ritual.—We shall now consider the domestic ritual in use in Kumaon, premising that it is followed as a rule only by the educated and orthodox, and that its use has not yet permeated the masses, nor are its rules, except in a very abbreviated form, understood by many of them. The ritual for temple use has been compiled by a class for their own purposes and usually with the object of setting forth the preferential cult of some particular deity or of inculcating the tenets of some particular sect, and although the general outline of the ceremony is the same in all, the details vary considerably. The village-deities have no formal ritual committed to writing and in general use, so that the ceremony is a meagre imitation of that in use in the orthodox temples and varies with the celebrant. The authorized domestic ritual in use in Kumaon fairly represents the ceremonial observed by those who consider themselves one in faith with the orthodox Hindús of the plains. It will show no great divergence in ordinary ceremonies from the procedure observed in the plains, for which, however, I have not been able to procure an authority that could be relied upon. The work† consulted is the *Daśa-karmádi*

* Muir's Sansk. Texts. II, 412, 482.

† The copy used by me contains the preparatory ceremonies (pp. 1-28); those held on the birth of a son (pp. 29-61); those on his assuming the sacrificial thread (pp. 69-132), and those on marriage (pp. 150-205), besides other services for special occasions. This work has since been lithographed. I have not considered it necessary to give many of the *mantras* at full length for any one can verify them by asking any intelligent Bráhman for them and giving the catchwords recorded here. It may be well to notice that the Sanskrit employed is sometimes barbarous in the extreme (= dog Latin), but I give it faithfully.

paddhati, or 'Manual of the ten rites, &c.,' which is held in great esteem in this portion of the Himálaya. It gives the ritual to be observed on every occasion from the conception of the native until his marriage. Each ceremony has certain preparatory services common to all, and which occupy the first ten chapters of the Manual, *viz.*:—(1), *Svasti-váchana*; (2), *Gaṇeśa-pújá*; (3), *Mátṛi-pújá*; (4), *Nándí-śráddha*; (5), *Puṇyáha-váchana*; (6), *Kalaśa-sthápana*; (7), *Rakshá-vidhána*; (8), *Ghṛi-tachchháyá*; (9), *Kuśa-kaṇḍiká*; and (10), *Kuśa-kaṇḍikopayogisangraha*. In practice, however, the ceremony is shortened by the omission of several of these services and, as a rule, the second, third and fourth chapters with the sixth and seventh are alone read. With regard to these and all other observances their length and character would seem to depend on the means and inclination of the person who causes the ceremony to be performed. The poor man obtains a very shortened service for his few coins, whilst the wealthy can command the entire ritual and the services of numerous and skilled celebrants. The rich can afford to keep Bráhmans in their employment who vicariously perform for them all the intricate and tedious ceremonies prescribed by the ritual and at once relieve their masters from a disagreeable duty and ensure for them the fruits of a devout life. It will be seen, however, that the earlier chapters form a necessary part of the ritual of every important ceremony and are repeated numbers of times at different stages. They are referred to hereafter as the 'preparatory ceremonies' and are closed with a *sankalpa* or dedication to the particular object in view at the time, so that the merit acquired by performing them may aid in the attainment of the object aimed at.

Daily prayers.—Before commencing an account of the ceremonies proper to particular objects and seasons it will be convenient to refer here to those known as *nitya karma* or obligatory, to be observed at morn, noon and eve. The necessities of every-day life, however, contrive that one recital before taking food, either in the morning or in the evening, shall be considered sufficient, and we shall now describe the morning service, which with a few slight changes serves for all. It need hardly be said that these are unknown to the ordinary Khaśiya population, except here and there in a very diluted form. The usual morning routine is first gone through by drawing up the sacrificial thread and placing it on the left ear before retiring, next washing the teeth, bathing and applying the frontal marks with powdered sandal, or red sandars and rice.

Achamana.—The *sandhyá* or office of domestic worship then commences and is opened by placing some water in the hollow of the right-hand from which a sup is taken (*achamana*) whilst mentally repeating the mantra:—'*Oṃ*, to the Rig-veda, hail:' a second is then taken with

the words :—'*Oṃ*, to the Yajur-veda, hail :' and a third with the words : —'*Oṃ*, to the Sáma-veda, hail.' A fourth is then taken whilst repeating the formula :—'*Oṃ*, to the Atharva-veda, hail,' and is rejected immediately on completing the invocation. The *choṭi* or tuft of hair left on the top of the head is then laid hold of whilst the following mantra is mentally repeated :—'Invoking the thousand names of Brahmá, the hundred names of the top-knot, the thousand names of Vishṇu I tie my top-knot.' The mouth is then cleansed by passing the thumb of the right hand over the moustache to each side from the parting.

Sparśa.—Then follows the sprinkling (*indriya sparśa*) of the mouth, nostrils, eyes, ears, navel, breast, throat, head, arms and palms and back of the hands with water and the salutation '*Oṃ*' perfixed to the name of each member* and mental prayer for its health and strength.

Abhisheka.—The worshipper then touches the ground with the third finger of his right-hand whilst repeating the mantra :—"O thou, who hast made this earth and all it contains and protectest all by thy power, make me pure." Water is next taken in the hand whilst he mentally recites the mantra :—"May any evil or trouble which is due to me this day be by thy power prevented." This is followed by the first *abhisheka* or aspersion in which water is taken in the left hand and sprinkled with the right hand over each member as before with the purificatory mantra : —"*Oṃ bhú*, protect my head ; *oṃ bhuvaḥ*, protect my eyes ; *oṃ svaḥ*, protect my throat ; *oṃ mahah*, protect my breast ; *oṃ janah*, protect my navel ; *oṃ tapaḥ*, protect my feet ; *oṃ satyaṃ*, protect my head ; *oṃ khaṃ*, Brahmá protect me everywhere." This is known as the *púrvaka-márjjana-mantra*. Most of us have seen the natives of India at their devotions and have doubtless wondered what their meditations were and what the curious movements of the hands and muttered words intended. I am not aware that these have ever been the subject of inquiry, or that they have ever been recorded and explained in any European language, and now give the *práṇáyáma* and its prefaces after a lengthened practice of them by myself.

Práṇáyáma.—The *práṇáyáma* occurs both in the daily prayers and in the short private devotions performed in temples and is always prefaced by the *anga-nyása* and *kara-nyása*. These consist of separate sets of salutations to the seven members of the body (*anga*) and to the seven members of the hand (*kara*), each of which is accompanied by a mystical mantra in which the deities of one of the seven worlds is saluted in order that they may come and take up their abode for the time in the member of the

* *Oṃ vák, vák ; Oṃ práṇaḥ, práṇaḥ ; Oṃ chakshu, chakshu ; Oṃ śrotraṃ, śrotraṃ ; Oṃ nábhiḥ ; Oṃ hṛidayaṃ ; Oṃ kaṇṭhaṃ ; Oṃ siraḥ ; Oṃ báhubhyáṃ yasobalaṃ ; Oṃ karatala-karaprishṭhe.*

worshipper dedicated to them. This formula will be better understood from the following table :—

The seven spheres of the	Sanskrit names.	Hindi equivalents.	Members of the hand.	Members of the body.
1. Earth ...	Bhúr-loka ...	Bhu ...	Thumb *(angushṭa)*	Chest (*hṛidaya*).
2. Sky ...	Bhuvar-loka...	Bhuvar ...	Fore-finger *tarjaní*).	Head (*siras*).
3. Planets ...	Svar-loka ...	Svaḥ ...	Second ditto (*madhyama*).	Scalp-lock (*śikhá*).
4. Saints ...	Maharloka ...	Mahaḥ ...	Third ditto (*anámika*).	Throat (*kaṇṭha*).
5. Sons of Brahmá.	Jano-loka ...	Jana ...	Fourth ditto (*kanishṭika*).	Eye (*netra*).
6. Penance ...	Tapo-loka ...	Tapas ...	Palm (*karatala*)	Navel (*nábhi*).
7. Truth ...	Satya-loka ...	Satyaṃ ...	Back of the hand (*karapṛishṭa*).	Back (*pṛiṭh*).

The *kara-nyása* is first performed and is made by holding the nose by the right hand and placing the first finger of the left hand inside and against the middle joint of the thumb and drawing it gently to the top of the thumb whilst repeating mentally the *mantra* :*—*Oṃ bhúḥ angushṭábhyáṃ namaḥ*. The second motion is made by drawing the thumb from the first joint of the forefinger to the top whilst repeating mentally the *mantra* :—*Bhuvaḥ tarjanibhyáṃ namaḥ*. The remaining motions are similar and for the second finger the *mantra* :—*Svaḥ madhyamábhyáṃ namaḥ* is repeated ; for the third :—*Tat savitur vareṇyam anámikábhyáṃ namaḥ*, and for the fourth :—*Bhargo devasya dhímahi kanishṭhikábhyáṃ namaḥ*. Then the palms and backs of the hands are touched whilst the mantra :—*Dhiyo yo naḥ prachodayát karatala-karapṛishṭhábhyáṃ namaḥ* is repeated.

Anga-nyása.—The *anga-nyása* or mental assignment of the members of the body to the protection of the great mantras is as follows :—*Oṃ bhúḥ*, glory to the heart ; *bhuvaḥ*, glory to the head ; *sváhá* (hail) ; *svaḥ*, to the top knot, *vashaṭ* (here meaning hail) ; *tat savitur vareṇyam*, to the navel or the armour of the mantras, *húṃ* ; *bhargo devasya dhímahi*, to the

* *Bhúr, bhuvaḥ, svaḥ*, are the three mystical words known as the *Vyáhriti mantra* and are untranslateable. The mantras here given simply mean '*Oṃ*, glory to the thumb' : to the first finger and to the second finger, &c. The *gáyatrí* verse is then brought in and divided into three portions as a preface to the salutation to the remaining parts of the hand. In full it is '*Tat savitur vareṇyam bhargo devasya dhímahi dhiyo yo naḥ prachodayát* and occurs in Rig-Veda, III., 62, 10. From being addressed to the sun it is called Sávitri and is personified as a goddess. Hereafter we shall see that other verses also are called *gáyatrí*. In some cases both hands are used and the nose is not held by the right hand.

eyes, *vaushat ; dhiyo yo naḥ prachodayát*, to the weapon of the mantras, *phaṭ, phaṭ, phaṭ* accompanied by clapping the hands. Other gesticulations are bringing the right hand around the head and clapping the hands three times which is supposed to purify all beings ; also snapping the thumb against the two fore-fingers thrice with appropriate mantras which bring the deity into one's self.

The earth, air and sky are represented by the mystic syllables *bhúr, bhuvaḥ, svaḥ*, whilst these again are held by some to represent the old trinity Agni, Indra and Súrya, who even amongst the non-Bráhmanical tribes attained to considerable popularity. Again in the mystic word '*Oṃ*' we have according to some A. U. M., representing the initial letters of the names of Agni, Varuna (a form of Indra) and Mitra (one with the sun) : others refer these letters to Brahmá, Vishṇu and Síva, who comprise the *Tri-múrti* of advanced Bráhmanism. A triad is also worshipped at the temple of Jagannátha in Orissa, the actual forms of which represent the double cursive form of '*Oṃ*' as ordinarily written in manuscript, and that this is the true meaning of the form which those unnecessarily hideous blocks assume I have little doubt. In a note to his translation of the Málatí and Mádhava of Bhavabhúti, Professor Wilson* explains '*Nyása*' as " a form of gesticulation made with a short and mystic prayer to the heart, the head, the crown of the head and the eye, as *Oṃ sirase namaḥ*, 'Om ! salutation to the head' ; with the addition of the *kavacha*, the armour or syllable *phaṭ*, and the *astra*, the weapon or syllable *huṃ*. The entire *mantra*, the prayer or incantation, is then '*Oṃ sirase namaḥ, huṃ, phaṭ*." These formulæ were specially used by the sect of Yogís or Páśupatas, " the oldest sect probably now existing amongst the Hindus and with whose tenets and practices Bhavabhúti appears to have been thoroughly acquainted." Again Cunningham† in his Ladák gives the *mantra* addressed to the Bodhisattwas by the Buddhists of Tibet, taken from an actual Tibetan stereotype block, which ends with the line :—

'*Oṃ Vajra-krodha, háyagríva, hulu, hulu, hun, phat.*

This important portion of the daily prayer is therefore clearly derivable from the non-Bráhmanical worship of deities which we shall show hereafter were probably of montane origin and common alike to the S'aiva and Bauddha systems.

Dhyána.—In the daily worship the *anga-nyása* is usually followed by the *dhyána* or *aghamarshana* or meditation in which with clasped hands and closed eyes the celebrant mentally recites and considers the verses commencing :—*Oṃ ṛitaṃ cha satyaṃ chábhíddhát* &c. In Kumaon, the *práṇáyáma* is occasionally further prefaced by a short address (*chhandaḥ*)

* Works XII : 5, 11, 53.

† p. 386.

in the form of a *mantra* to the personified '*Oṃ*,' the Brahmarshis, Vaidik metres and the Supreme Being :—Water is taken from the receptacle in the hand whilst the address is mentally recited, after which the water is thrown away. The first motion of the *práṇáyáma* is made by placing the fore-finger of the right-hand on the right nostril and exhaling with the other nostril whilst a mystical *mantra** is mentally repeated. This occurs three times whilst exhaling and three times whilst inhaling.

Abhisheka.—A second *abhisheka* or purificatory aspersion of the body generally takes place next with the mantra :—*Oṃ ápo hishṭá mayo bhuvaḥ snána úrjjye, &c.* Then water is taken in the hand and applied to the nose with the mantra :—*Drupadád iva mumuchána sannasnáto malád iva hu pútaṃ pavitreṇa váhyam ápaḥ śuddhantu me nasaḥ.*

Anjali.—Next the *anjali* is performed in which water is taken in the hollow of both hands and whilst the *gáyatrí*-mantra is slowly recited the water is poured through the fingers on the ground. The celebrant should stand with his face towards the east whilst the verse is chaunted and should repeat it three times.

Upasthána.—This is followed by the *upasthána* or approaching the deity in worship in which the celebrant draws the fore-arms parallel to the body with the palms of the hands open and the thumbs on a level with the ears whilst the mantra is repeated :—*Oṃ udvayantamasas, &c.*

Next the head, navel, heart, top-knot and forehead are touched with appropriate mantras.† The sacrificial thread is then wound around the right-hand three times whilst the *gáyatrí* is repeated either 8 or 10 or 28 or 108 or 1,000 times according to the inclination of the worshiper. Water is again taken in the hand and if the *gáyatrí* has been repeated a fixed number of times, the morning's devotion ends with the formula :—*Brahmá svarúpiṇe bhagaván príto'stu ;* if at mid-day, with *Vishṇu, &c.*, and if at evening with *Rudra, &c.*, whatever the number may be. Where no account of the number of times is kept the conclusion‡ is :—" O Lord, the treasure of mercy, through whose compassionate goodness whatever is worthy in my devotions is accounted for righteousness, may the four objects of existence (religious merit, wealth, pleasure and final emancipation) be attained by me this day." Whilst these prayers are being repeated the water is allowed to trickle slowly on to the ground. The

* *Oṃ bhúḥ, oṃ bhuvaḥ, oṃ svaḥ, oṃ mahaḥ, oṃ janaḥ, oṃ tapaḥ, oṃ satyaṃ, tat savitur vareṇyam bhargo devasya dhímahi dhiyo yo naḥ prachodayát apo jyoti raso 'mṛitaṃ brahma bhúr bhuvaḥ svaram.* A mixture of the *vyáhṛiti* and *gáyatri* mantras with some additions.

† *Agnir mukhe, brahmá hṛidaye, vishṇuḥ śikháyáṃ, rudro laláte.*

‡ *He iśvara dayánidhe bhavatkṛipayánena japopásanádi-karmaná dharmárthakámamokshánáṃ sádhyasiddhir bhaven naḥ.*

sandhyá closes with the *daṇḍavat* or salutation* and the *áchamana* or rinsing of the mouth as in the beginning.

Svasti-váchana.—The *Svasti-váchana* is seldom read by any class in Kumaon. It opens with the direction that the celebrant should at an auspicious moment bathe, put on clean clothes, affix the frontal mark and seated with his face towards the east in a properly prepared place, recite the invocation of blessings.† The Gaṇeśa-*púját* follows and is universally observed on all occasions as the *pradhána-anga* or leading section of every rite. The rubric directs that the celebrant should rise early on the morning of the ceremony and having bathed and put on clean clothes should, after performing the *nitya-karma*‡, light a lamp and commence the worship of Gaṇeśa, which should precede every other rite.

Gaṇeśa-púját.—First adore Vishṇu with the following verse:—"Thou who art clothed in white, moon-coloured, four armed, of pleasing face, the remover of obstructions, the bestower of good fortune and victory, what can oppose thee Janárdana, of the colour of the lotus, who dwellest in the hearts of thy votaries." Next follows the adoration of Gaṇeśa with the verse:—"*O Vakratuṇḍa*, great-bodied, bright like a kroṛ of suns, protect me from harm, O God, always in every work."

Argha-sthápana.—Then the ceremony known as *argha-sthápana* or consecrating the *argha*§ takes place. Take some powdered sandal-wood and draw on the ground the figure of a triangle and around it a square and again a circle, then place on them sandal, rice and flowers. Next place the *argha* filled with water in the middle and say:—"In this water may the waters of the Gangá, Jamuná, Godávarí, Sárasvatí, Narmadá, Sindhu and Káverí be present." Next put sandal, rice and flowers in the water of the *argha*. Then set up a brazen vessel on which the image of the sun has been drawn (with sandal or red sandars) in the form of interlaced triangles, the apices of which will represent his rays and a circle around them his form, and before presenting to it the water of the *argha* with flowers recite mentally the *dhyána*-mantra‖ and in

* The hands are clasped in front of the breast whilst this mantra is repeated: *Oṃ namaḥ sambhaváya cha mayobhaváya cha namaḥ śankaráya cha namaḥ śiváya cha śivataráya cha etc.*

† The *váchana* consists of numerous verses in praise of the gods.

‡ The *sandhyá*, already noticed.

§ A small cup usually made of brass.

‖ *Aruṇo' ruṇapankaje nishaṇṇaḥ kamale, bhítivarau karair dadhánaḥ svaruchábhita-maṇḍalas trinetro ravir ákalpaśatákulo vatánnaḥ.*

offering the water of the *argha*, the mantra* in which the sun is invoked as the thousand-rayed, full of brightness, lord of the world, &c., and is asked to accept the domestic *argha* of his worshipper. Next sprinkle mustard-seed, sesamum and rice in order that no evil spirit may approach and interrupt the ceremony and use the *mantra*† for keeping off demons goblins. Then crack the thumb and second finger together three times and behind the back in order that the goblins behind may be driven away. The earth should next be saluted and afterwards Vishṇu with the verse :—'O thou whose throne is the lotus, &c.' Fill the *argha* once more and sprinkle all the materials for worship and go through the *práṇáyáma*. Next take sesamum, *kuśa*-grass, barley and water, and make the great dedication‡ with the mantra :—'Om Vishṇu, Vishṇu, Vishṇu, adoration to the supreme, the first eternal male,' &c., with the usual definition of place, time and person, *viz.*, in the island Jambu, the division Bharata, the country of the Aryas, in this holy place, the Himavat and hills, in the latter half of the life of Brahmá, in the holy *Váráha-kalpa*, at the end of the Kṛita, Tretá and Dwápara *Yugas*, *&c.*, giving the year, season, month, fortnight, day and hour of the ceremony, with the name of the person in whose behalf the ceremony is performed, his father and grandfather's name, caste and family, and the ceremony itself, with the prayer that the benefits to be derived from its performance may be bestowed on him.

Name of Gaṇeśa.—The worship of Gaṇeśa now proceeds, each step in the ceremony being accompanied by an appropriate mantra. First the *pítha* or triangle is addressed with the mantra containing the names of

* *Ehi súryya sahasráṃśo tejoráśe jagatpate, anukampaya máṃ bhaktyá gṛihánárgham divákara.*

† *Apakrámantu bhútáni piśácháḥ sarvato diśam sarveshám avirodhena brahmakarmasamárabhet páikhaṇḍakáriṇo bhútá bhúmau ye chántarikshagáḥ diviloke sthitá ye cha te naśyantu śivájñayá nirgachchhatáṃ cha bhútánáṃ vartma dadyát svavámataḥ.* The following is used in Bengal (Prof. Williams) for the same purpose :—"Help me, goddess of speech' : *Aṃ* to the forehead, *Aṃ* to the mouth. *Iṃ* to the right eye, *Iṃ* to the left eye, *Uṃ* to the right ear, *Uṃ* to the left ear, *Iṃ* to the right cheek, *Iṃ* to the left cheek, *Eṃ* to the upper lip, *Aiṃ* to the lower lip, *Oṃ* to the upper teeth, *Auṃ* to the lower teeth, *Taṃ*, *Thaṃ*, *Daṃ*, *Dhaṃ*, and *Naṃ* to the several parts of the left leg, *Paṃ* to the right side, *Phaṃ* to the left side, *Baṃ* to the back, *Maṃ* to the stomach, *Yaṃ* to the heart, *Raṃ* to the right shoulders, *Laṃ* to the neck bone, *Vaṃ* to the left shoulders, *Laṃ* from the heart to the right leg, *Haṃ* from the heart to the feft leg *Kshaṃ* from the heart to the mouth."

‡ *Oṃ vishṇuḥ vishṇuḥ vishṇuḥ namaḥ paramátmane śrípuráṇapurushottamáya Oṃ tatsadatraprithivyáṃ jambúdwípe bharatakhaṇḍe áryyávartte puṇyakshetre himavatparvataikadeśe brahmaṇodwitíyapuráŕddhe śríśvetavárahakalpe kṛitatretádwáparánte saptame vaivaśvatamanvantare ashṭávinśatitame kaliyugasya prathamacharaṇe shashṭyavadánamadhye, &c.*

Gaṇeśa and of his mother:—*Oṃ* thou who art fierce (*tívrá*), blazing (*jválini*), Nandiṇi, the giver of pleasure (*bhogadá*), Kámarúpá, Satyá, the terrible (*ugrá*), the bright (*tejovatí*), thou who removest all obstacles (*vighnanáśiní*). Oṃ thou who sittest on the lotus, I meditate on thee, the one-toothed, elephant-headed, large-eared, four-armed, holder of the noose and goad, perfect Vináyaka."

Áváhana.—This is followed by the invitation (*áváhana*) to Gaṇeśa to be present and take the place prepared for him with the mantra:—*Vináyaka namas te'stu umámalasamudbhava imáṃ mayá kṛitáṃ pújáṃ gṛiháṇa sura-sattama.*—'Glory to thee Vináyaka, born of Umá, accept my worship, best of gods.'

Ásana.—Next comes the *ásana* or throne to which the deity is invited with the mantra:—*Nánáratna-samáyuktaṃ muktáhára-vibhúshitaṃ svarṇasiṃhásanaṃ chára prítyarthaṃ pratigṛihyatáṃ.* 'Accept this golden throne, set with various gems and adorned with strings of pearls all for love of thee.'

Pádya.—Next water for washing the feet (*pádya*) is offered with the mantra:—*Gaurípriya namas te'stu śankarapriya sarvadá bhaktyá pádyaṃ mayá dattaṃ gṛiháṇa praṇatapriya.*—'Glory to thee beloved of Gaurí, ever beloved of Sankara, accept the water devoutly presented by me.'

Argha.—Next the *argha* with the mantra:—*Vratam uddiśya deveśa gandhapushpákshatair yutaṃ gṛiháṇárghaṃ mayá dattaṃ sarvasiddhipradodbhava.*—'O lord of gods, who art the bestower of all blessings, accept this argha furnished with sandal, flowers and rice, and given by me.'

Snána.—Then the ablution (*snána*) with the mantra:—*Snánaṃ panchámṛitair deva gṛiháṇa gaṇanáyaka anáthanátha sarvvajña gírváṇa paripújita, oṃ gaṇánáṃ twá gaṇapati gvaṃ havámahe priyáṇáṃ twá priyapati gvaṃ havámahe nidhínáṃ twá nidhipati gvaṃ havámahe vaso mama áham ajáni garbbhadham á twam ajámi garbbhadham.*—'O god, leader of the heavenly troops, protector of the defenceless, omniscient, thou that delightest in invocations, accept this ablution made with the five kinds of ambrosia.* *Oṃ* thou who art leader of the attendants of S'iva, thou who art lord of the beloved, lord of the treasures (of Kuvera), thou who art my treasure, I who am without wife and relations invoke thee the procreator.'

Vastra.—Next sprinkle a little water with a spoon (*áchamani*) on the image of Gaṇeśa and proceed to clothe it (*vastra*) with the mantra:—*Raktavastra-yugaṃ deva devángasadṛiśaprabham, bhaktyá dattaṃ gṛiháṇedaṃ lambodara harapriya:*—'O God Lambodar, beloved of S'iva, accept this pair of scarlet garments, devoutly given.'

Janeo.—Then the *janeo (yajñopavíta)* or sacrificial thread is placed on the image with the mantra—*Rájataṃ brahmasútraṃ cha kánchanasyotta-*

* Milk, curds, butter, honey and sugar.

ríyakaṃ, gṛihâṇa châru sarvvajña bhaktânâṃ siddhidâyaka.—'O giver of happiness to thy worshippers, do thou who art omniscient, accept this pleasing sacrificial thread woven with gold and silver.

Gandha.—Next sandal (*gandha*) with the mantra:—*Gandhaṃ karpúrasaṃyuktaṃ divyaṃ chandanam uttamam, vilepanaṃ suraśreshṭha prítyarthaṃ pratigṛihyatâm.*—'O best of gods, let this agreeable sandal mixed with camphor be accepted as an unguent for thy person, for the love I bear thee.'

Akshata.—Next rice (*akshatâḥ*) with the mantra:—*Akshatân dhavalân devasuragandharvvapújita sarvvadevanamaskáryya gṛihâṇa madanugrahât.*—'Thou who art worshipped by the gods, Gandharvas and all the deities, accept my offering of white rice.'

Pushpa.—Next flowers (*pushpâṇi*) with the mantra:—*Sugandhíni supushpâṇi málatyádíni vai prabho mayânítâni pújârthaṃ pushpâṇi pratigṛihyatâm.*—'O Lord, accept the sweet-smelling garlands and flowers brought by me for thy worship.'

Dhúpa.—Then incense (*dhúpa*) with the mantra:—*Daśângaṃ guggulaṃ dhúpaṃ sugandhiṃ sumanoharam, Umásuta namas tubhyaṃ dhúpaṃ me pratigṛihyatâm.*—'Hail to thee, O son of Umá, accept from me this incense consisting of bdellium and ten (other) ingredients, fragrant and very pleasing.'

Dípa.—Then a lamp (*dípa*) with the mantra:—*Gṛihâṇa maṇgalaṃ dípaṃ ghṛitavarttisamanvitam, dípaṃ jñânapradaṃ devarudrapriya namo'stu te.*—'Accept this lamp, supplied with clarified butter, the bestower of knowledge, established in thy honour, O beloved of the gods.'

Naivedya.—Then sweetmeats (*naivedya*) with the mantra:—*Saguḍân saghṛitâṃ-ś-chaiva modakân ghṛitapáchitân naivedyaṃ saphalaṃ dattâṃ gṛihyatâṃ vighnanâśana.*—'O thou who removest difficulties accept these sweetmeats cooked in clarified butter.' One of the sweetmeats should then be taken up and placed before the image of Gaṇeśa, who should also receive some article of value. Then repeat the *múla*-mantra, which consists of a mental recitation (*japa*) of the formula *Oṃ Gaṇeśâya namaḥ*—'*Oṃ*, glory to Gaṇeśa.'

Pán.—Next *pán* (*támbúla*) is presented with the mantra:—*Púgíphalasamáyuktaṃ nágavallídalânvitam, karpúrádisamáyuktaṃ támbúlaṃ pratigṛihyatâm.*—'May this *pán* with betel and the leaves of the betel and spices be accepted.' When presenting the sweetmeats which are usually ten in number (hence the name *daśamodaka*) the following formula is used:—'I (so and so) for this (so and so) purpose bestow on this Bráhman for the sake of Gaṇeśa these sweetmeats, rice, flowers and goods with this mantra:—*Vighneśa viprarúpeṇa gṛihâṇa daśamodakân dakshiṇâghṛitatámbúlaguḍayuktân mameshṭada.*—'O Vighneśa (obstacle-lord), in Bráhman form, accept these ten sweetmeats with the gifts,

clarified butter and *pán*, and grant my desire.' In reply the celebrant accepts the gift on the part of Gaṇeśa and says :—*Dátá vighneśvaro devo gṛihíta sarvvavighnaráṭtasmát idaṃ mayá dattaṃ paripúrṇaṃ tad astu me.*

Prárthana.—Next follows the prayer (*prárthana*) :—*Vináyaka namas tubhyaṃ satataṃ modakapriya avighnaṃ kuru me deva sarvakáryyeshu sarvvadá.*—'Glory to thee Vináyaka, fond of sweetmeats, always protect me from difficulties everywhere.'

Dúrva.—This is followed by an offering of a stalk of *dúb* grass with the mantra :—*Oṃ gaṇádhipa namas te'stu oṃ umáputra namas te'stu oṃ aghanáśana namas te'stu oṃ vináyaka namas te'stu om iśaputra namas te'stu oṃ sarvasiddhipradáyaka namas te'stu oṃ ekadanta namas te'stu oṃ ibhavaktra namas te'stu oṃ múshakaváhana namas te'stu oṃ kumáraguro tubhyaṃ namo'stu oṃ chaturthíśa namo'stu te oṃ káṇḍát káṇḍát prarohanti parúśaḥ parúśas pari evá no dúrve pratanu sahasreṇa śatena cha.* 'Oṃ, glory to the lord of the heavenly hosts, the son of Uma, the remover of obstacles, Vináyaka, the son of Iśa, the bestower of happiness, the one-toothed, with an elephant's head, having a rat as his vehicle, the preceptor of Skanda, the lord of the fourth day, to thee rise our hymns from these stalks of *dúb* budding at every knot with hundreds and thousands of shoots.'

Nírájana.—Next follows the *nírájana* or waving of a lamp before the image, which is accompanied by the following mantra :—*Antastejo bahisteja ekíkṛityámitaprabham árátrikam idaṃ deva gṛiháṇa mad-anugrahát, Oṃ agnir jyotirjyotir agniḥ sváhá súryyo jyotir jyotiḥ súryyaḥ sváhá agnir varchcho jyotir varchchaḥ sváhá súryyo varchcho jyotir varchchaḥ sváhá súryyo jyotir jyotiḥ sváhá.*—'O god accept from favour to me this ceremony of waving the light (*árátrika*) before thee who art light, hail to Agni who is light, to the Sun who is light.'

Pushpánjali.—Then follows the offering of flowers in the hollow of both hands (*pushpánjali*) with the mantra :—*Sumukhaś chaikadantaś cha kapilo gajakarṇakaḥ lambodaraś cha vikaṭo vighnanáśo vináyakaḥ dhúmraketur gaṇádhyaksho bhálachandro gajánanaḥ.* This verse gives twelve names* of Gaṇeśa, and it is promised that whoever reads them or even hears them read when commencing to study or in making the preparations for a wedding, in coming in or going out, in war or in trouble will never meet with any obstacle that he cannot overcome. As the axe is to the jungle-creeper so this verse containing the names of Gaṇesha is to all obstacles and difficulties.

* The usual names are Sumukha (beautiful-faced), Ekadanta (one-toothed), Kapila (red and yellow complexion), Gajakarṇaka (elephant-eared) Lambodara (corpulent), Vaikṛita (misshapen), Vighnanáśa (deliverer from difficulties), Vináyaka (leader), Dhumra-ketu (smoke-bannered), Bhálachandra (better moon), Gajánana (elephant-visaged),

Dakshiṇá-sankalpa.—Next comes the gift of money as an honorarium to the celebrant with the formula as in the first *sankalpa* and the usual definition of place, time, name, caste, &c., of the person who causes the ceremony to be performed and that it is for the sake of Gaṇeśa. The celebrant in return on the part of Gaṇeśa, asperses his client and places flowers, rice, &c., on his head, concluding with the mantra :—*Oṃ gaṇánáṃ tvá gaṇapati gvaṃ havámahe priyáṇáṃ tvá priyapati gvaṃ havámahe*, &c., as before. The Khaśiya very considerably abridges these observances but he knows Gaṇeśa (the Gaṇapati of the Dakhin) and reverences him and Gaṇeśa is clearly a non-Bráhmanical deity and is honoured as a follower of S'iva by the Páśupatas from a very early period.

Mátṛi-púját.—The ritual for the *Mátṛi-púját* comes into use after the service for Gaṇeśa and usually forms a part of the preface to any other ceremony. The celebrant takes a plank and cleans it with rice-flour and then draws sixteen figures representing the *Mátṛis* and to the right of them a figure of Gaṇeśa. Then in the upper right-hand corner the sun is represented as in the Gaṇeśa-*púját* and in the upper left-hand corner the moon by a number of lines intersecting a central point and having their extremities connected by a series of semi-circles. The celebrant then makes a brush from five or six stalks of *dúb*-grass and

Gaṇádiśa (lord of the celestial hosts). The following is a rough translation of the address :—

1. Whosoever shall worship thee under these twelve names and even whosoever shall attend and hear them read shall certainly prosper in this world.
2. Whosoever shall repeat these twelve names on the day of marriage or on the birth of a child, or on proceeding on a journey or on going to battle or in sickness or on entering a new house or business shall be freed from the effects of evil.
3. O Vakratuṇḍa, O Mahákáya, resplendent like a thousand suns, prosper my work always, everywhere.
4. O thou of the great body and short in stature, whose head is like that of an elephant. Thy breath like nectar attracts the insects hovering in the ether to thy lips. Thou art able with one blow of thy tusk to destroy the enemies of thy suppliants. Thou that art the adopted son of Devi hast vermillion on thy brow and art ever liberal. Thou art such, O Gaṇeśa, that I bow to thee, the beautiful one of a yellow complexion and three-eyed.
5. Presenting this lamp I wave it before thee. Thou, O Lambodara, who art the ruler of the universe, the adopted son of Párvatí, aid me.
6. All men worship thee and adore thy feet ; thou that livest on sweets, and art borne on a rat and whose abode is magnificent, aid me.
7. Thou that bestoweth wealth and accomplisheth the desires of thy worshippers, aid me.
8. Thou wieldest the trident and hast ever been merciful to me. Most assuredly all who worship thee shall obtain every happiness.

dipping it in cow-dung touches each of the figures which represent the *Mátṛis*. Then the *argha-sthápana*, *práṇáyáma* and *sankalpa* as in the preceding ceremony are gone through with the formula as to place, time, caste of celebrant and object, &c., of the ceremony which is addressed to Gaṇesha and Gaurí and the other *Mátṛis*.

Pratishṭhá.—Then the Mátṛis are praised in certain verses* known as the *pratishṭhá*, then again in the *dhyána* or meditation, and again by name whilst presenting a flower to each:—"*Oṃ gaṇapataye namaḥ*," followed by Gaurí, Padmá, Sachí, Medhá, Devasená, Svadhá, Sváhá, Mátṛi, Lokmátṛi, Dhṛiti, Pushṭi, Tushṭi, and the household female deities. The formulæ connected with the invitation, &c., in the preceding ceremony are then gone through, *viz.*:—*aváhaṇa*, *ásana*, *pádya*, *argha*, *snána*, *áchamana*, *vastra*, *gandha*, *akshata*, *pushpa*, *dhúpa*, *dípa*, *naivedya* and gifts.

Vasordhárá.—Next comes the *vasordhárá*, which is performed by taking a mixture of clarified butter and a little sugar and having warmed it in the *argha*, letting it stream down the board some three, five or seven times whilst repeating a mantra. The celebrant then receives a piece of money from the person for whose benefit the ceremony is performed, and dipping it in the clarified butter (*ghí*) impresses a mark on the forehead and throat of the person from whom he receives it and keeps the coin. Then comes the *nírájana* or waving of a lamp before the figures as in the preceding ceremony. Next follows the offering of flowers in the upturned palms of the hands (*pushpánjali*), winding up with a hymn in honour of the sixteen *Mátṛis* and gifts to the celebrant, who in return places flowers from the offerings on the head of the giver. The worship of the *Mátṛis* or divine mothers is another very interesting observance of other than Bráhmanical origin. They are reverenced as separate entities in the *Mátṛi-púját*, *Dwára-mátṛi-púját* and *Jíva-mátṛi-púját* and here have no apparent connection with the worship of the female energy or consort of the great divinities. They are found under various names amongst the beings worshipped by the aboriginal and non-Aryan tribes throughout the whole of India and in the Bauddha system of Nepál and Tibet, and have come from that dæmonism which has had such influence on both Buddhism and S'aivism and which found its development in the Tantras of both sects. Enough has not yet been recorded to satisfactorily assign to them their exact place in the cycle of evolution, but there is no doubt that the conceptions known as divine mothers have held a high position and an important influence on the

* Rice is here taken and sprinkled over each figure whilst the *pratishṭhá* is spoken and during the *dhyána* the hands are clasped reverently in front of the breast and the head lowered and eyes closed.

changes in religion which occurred between the eighth and twelfth centuries of our era.

Nándí-śráddha.—The *Nándri* or *Nándí-śráddha* is also called the *Abhyudika-śráddha*, and though not universally observed here is sometimes introduced into the preparatory ceremonies. It opens with an invocation of Gaṇeśa. The celebrant then draws a figure of a conch and discus on the ground and makes an *ásana* or throne of three stalks of *dúb*-grass, on which he places a *pátra* or small brass-vessel like a lota and on it the *pavitra*.* Water, barley and sesamum are then applied, with appropriate mantras, and in silence, sandal, rice and flowers. The materials for the ceremony are then sprinkled with holy water whilst repeating a prayer. Next comes the *práṇáyáma*, a prayer for the presence of the deities in the house, a story of the adventures of seven hunters on the Kálanjar hill and the *sankalpa* or dedication. Then the enumeration of the ancestors for three generations on both the paternal and maternal side† and their adoration. This is accompanied by the invitation, &c., as in the preceding ceremonies for each of the twelve ancestors named and by special mantras which are too tedious for enumeration here.

Kalaśa-sthápana.—The *kalaśa-sthápana* or consecration of the water-pot is usually observed and commences with the washing of the *kalaśa* or vessel with sandal, curds and rice and covering it with a cloth. Beneath it is placed a mixture of seven sorts of grain, and then the person who causes the ceremony to be undertaken places his right hand on the ground whilst the celebrant repeats the mantra :—'*Oṃ mahí dyauḥ pṛithiví cha na imaṃ yajñaṃ mimikshatám pipṛitán no bharímabhiḥ.*' Then barley is thrown into the vessel and a hymn is chanted whilst water is poured over the vessel. Then the *kuśa-brahma*‡ is placed on it and sandal,

* The *pavitra* is made from a single stalk of *kuśa* grass tied in a knot of the form of a figure of eight. Each stalk has three leaves which some suppose are emblematic of the deity.

† In the male line an addition is made to the name to show the degree : thus the father has the addition *vasu svarúpa*, the grandfather that of *rudra svarúpa*, and the great-grandfather that of *áditya svarúpa*. Another addition is made to show the caste : thus a Bráhman is called *śarmma*, a Kshatriya is called *varmma*, and a Vaiśya or Śudra is called *gupta*. Amongst Bráhmans the real names of females are not given : the first wife of a Bráhman is called *sundarí* and the second and others *mundarí*. In other castes the real names are given as in the case of males. Thus Rámapati Bráhman's father, known in life as Kṛishṇadatta, would, at a ceremony undertaken by Rámapati, be called *Kṛishṇadatta śarmma vasu svarúpa*, and Rámapati's mother, if the first wife of his father, would be called *Kṛishṇadatta sundarí vasu svarúpa*.

‡ This consists of fifty stalks of the grass tied together and separated at one end into four parts by pieces of the grass placed at right angles to each other and to the bundle itself. The projecting edges of these pieces prevent the bundle falling completely into the pot or vessel.

dúrva, turmeric, milk, curds, clarified butter, the five leaves (*pippala*, *khadira*, *apámárga*, *udumbara* and *palásа*), the earth from seven places (where cows, elephants, white-ants live), the five gems,* coins and articles of dress with appropriate mantras. Then Varuṇa is invoked and the water, &c., in the *kalaśa* is stirred whilst these verses are recited in honour of the vessel:—'Vishṇu dwells in thy mouth, Rudra in thy neck and in thy bottom Brahma: in thy midst dwell the company of the Mátṛis: within thee are the seven oceans, seven islands, the four Vedas and the Vedángas. Thou wert produced at the churning of the ocean and received by Vishṇu, thy waters contain all places of pilgrimage, all the gods dwell in thee, all created things stand through thee and come to thee. Thou art S'iva, Vishṇu and Prajápati, the sun, Vasu, Rudra; all the deities and all the Maruts exist through thee. Thou makest works fructuous and through thy favour I perform this ceremony. Accept my oblations, be favourable to my undertaking and remain now and ever with me.' Then the vessel is worshipped with praise and prayer to the same intent. Next the *argha-sthápana*, *práṇáyáma* and dedication as in the previous ceremonies take place, and again the *kalaśa* is declared to be the abode of all the gods to whom the invitation, &c., as in the previous ceremony are given, *viz.*:—to Brahma, Varuṇa, Aditya, Soma, Bhauma, Buddha, Vṛihaspati, S'ukra, S'anaiśchara, Ráhu, Ketu, Adhidevatás, Pratyadhidevatás, Indra, the ten Dikpálas and the five Lokapálas. Then follows the waving of a lamp, offering of flowers and gifts with a dedication as before.

Rahshávidhána.—The ceremony of *rakshávidhána*, commonly known as *rakshábandí*, is seldom carried out in its entirety except by the wealthy. It consists in binding as an amulet a bracelet of thread on the right wrist, and the rite commences with making a mixture of barley, *kuśa*-grass, *dúb*-grass, mustard, sandal or red sandars, rice, cow-dung and curds, which is offered on a brazen platter to the bracelet forming its *pratishṭhá*. Then the person about to put on the bracelet invokes the presence of various deities to protect him from evil and says:—"To the east let Govinda protect me; to the south-east, Garuṛadhvaj; to the south, Váráha; to the south-west Nára Siṃha; to the west Keśava; to the north-west Madhusúdana; to the north S'ridhara, and to the north-east Gadádhara, above let Govardhana protect me; below, Dharaṇidhara and in the ten quarters of the world Vasudeva who is known as Janárdana. Let the conch protect me in front and the lotus behind; on the left, the club and on the right, the discus. Let Upendra protect my Bráhman and Vishṇu in his dwarf incarnation protect my Achárya; let Achyúta protect the

* Gold, diamond, sapphire, ruby and pearl; but it may easily be supposed that these are seldom given.

Ṛigveda; Adhokshaja, the Yajurveda; Kṛishṇa, the Sámaveda; Mádhava, the Atharvaveda and Aniruddha the other Bráhmans. May Puṇḍaríka protect the performer of the sacrifice and his wife and let Hari protect all defenceless places." The rubric goes on to say that the defence of the unprotected can always be effected by using *mantras* from the Vedas and the seeds of white mustard. In Kumaon a few coins are with turmeric, betel and white mustard seed tied up in a small bag (*poṭalí*) of white cloth and attached to the *rakshá* or bracelet until the work in hand, whether marriage or other ceremony, be accomplished. When this takes place the bag is opened and the contents are given to the officiating priest. The mantra commonly used in tying on the *rakshá* is as follows:—" *Yena baddho balirájá dánavendro mahábalaḥ, tena twám abhibadhnámi rakshemá chalamáchala,*" *&c.*

Játakarma.—The ceremony known as *játakarma* takes place on the birth of a son and is the next more important of those observed in Kumaon. It is divided into several sections which are considerably abbreviated in practice. The rite should be performed either on the day of the boy's birth or on the sixth day afterwards. If the father be at home, he should rise early and bathe and make the dedication as already described for the boy's long life, health and wisdom. He should then worship Gaṇeśa and make this his object that the boy should always be good, strong and wise, and that if the mother has become impure by violating any of the laws as to conduct or what should not be eaten, that her sin should be forgiven her and its consequences should not be visited on her boy. With the same object he performs the *Mátṛi-pújá* and the *Nándí-śráddha* already described. Sometimes the *puṇyáha-váchana* follows, which is merely the citation, feeding and rewarding some Bráhmans to be witnesses that the rite has been actually performed. The *kalaśa-sthápana*, already described, follows and after it the *navagraha* or nine planets are invoked to be present and assist. A vessel of some bright material is brought, and in it is placed a mixture of clarified butter and honey, with which the tongue of the child is anointed either with a golden skewer or the third finger of the right hand, whilst a prayer is read asking for all material blessings for the boy. The father then presents a coin to the celebrant, who dips it in a mixture of clarified butter and charcoal and applies it to the forehead and throat of both father and son and then with a prayer places flowers on their heads. The father then takes the boy in his lap and touches his breast, head, shoulders and back, whilst appropriate mantras praying for strength for those parts of the body are read by the celebrant. A present is again given to the celebrant and after it the umbilical cord is cut, leaving four finger-breadths untouched. The *abhisheka* or purification is then performed by

aspersing the assemblage with a brush formed from *dúb*-grass and dipped in the water of the *argha*. The frontal mark is then given with red sandars and a flower is presented with a verse committing the donee to the protection of the great god.

Shashṭhí-mahotsava.—The *shashṭhí-mahotsava* or great rejoicing in honour of Shashṭhí is held on the sixth day after the child's birth. If the father cannot afford to engage the services of a priest he can perform the ceremony himself, but usually he sends for his *purohita* and commits its duties to him. The father rises early and bathes, performing the *nitya-karma* as usual. He fasts all day and towards evening makes a ball of clay and smears it with cow-dung. He then takes a plank of wood and having cleaned it with rice-flour draws on it images of Skanda, Pradyumna and Shashṭhí. He then surrounds each figure with a hedge of cow-dung about a finger-breadth high and sticks upright in this hedge grains of barley. The image of Shashṭhí is then smeared with cow-dung in which cowries or coins are placed, and next follows the *Dwára-mátṛi-púját.* The father of the boy collects the materials for worship near the door of the house, and there drawing the figures of the mothers with rice, consecrates an *argha* and dedicates the rite to the day's ceremony. The goddesses are then installed :—'*Oṃ bhúr bhuvaḥ svaḥ Dwára-mátaraḥ* be established here and grant our reasonable desires.' Then a short meditation takes place, followed by an '*Oṃ*, hail' to Kumá, Dhanadá, Nandá, Vipulá, Mangalá, Achalá and Padmá, and the usual invitation, &c., as far as the dedication. Next comes the Gaṇeśa-*púját* with rinsing of the mouth and a dedication, then the *Mátṛi-púja* with similar detail, the *puṇyáha-váchana* and *kalaśa-sthápana* with an invitation to the nine planets to be present. The worship of Skanda and Pradyumna then proceeds with the usual installation address (*pratishṭhá*), meditation, invitation, &c., and prayer (*prárthana*) during the offering of flowers. This is followed by the *Shaṭkṛittiká-púját* or worship of the six nymphs, the foster-mothers of Skanda when amongst the *Kṛittikás*, with an enumeration of his names and an invocation to S'ivá, Sambhúti, Sannati, Príti, Anusúyá and Kshamá. Next comes the worship of Shashṭhí with the usual consecration of the *argha*, *práṇáyáma*, dedication and installation.

The *pratishṭhá* in honour of Shashṭhí is as follows :—"*Oṃ bhúr bhuvaḥ svaḥ* (*vyáhṛiti-mantra*), O Shashṭhí-deví, come here to this magical place which is smeared with cow-dung, remain here, consent to be honoured here. Then follows the unintelligible mystical formula ॐ ह्रां ह्रीं क्रौं यं रं लं वं शं षं सं हं ळं क्षं सः सोऽहं followed by "May Shashṭhí-Deví in spirit and essence be here and may the regents of all the senses be present." The mental assignment of the different parts of the body to its own peculiar tutelary deity (*nyása*) follows and should be made with the following for-

mula :—*Oṃ khá*, glory to the heart ; *Oṃ khí* to the head, *sváhá*, (here meaning 'Hail') ; *Oṃ khú*, to the top-knot, *vashaṭ* (here meaning 'Hail') ; *Oṃ khai*, to the mystical armour of the mantra, *hún ; Oṃ khau*, to the eyes, *vaushaṭ* (like *vashaṭ*) ; *Oṃ khá*, to the mystical weapon of the mantra, *phat* The *Shashṭhí-nyása* differs little from the *Anga-nyása* formula already described. Then follows the meditation on Shashṭhí as Mahá-devi, of the large breasts, four-armed, the consort of Śiva, swollen out like a peacock, clad in yellow clothes, beautiful, bearing a lance in her hand, Maheśvarí, &c. After the worship of Shashṭhí has been finished a garland of sweetmeats is thrown around the neck of a male kid. The ears of the kid are pulled until it bleats loudly some five or six times in order to frighten and drive away the evil spirits who are supposed to seek to disturb the ceremony. Shashṭhí is again addressed to protect the boy from evils by flood or field, by hill or dale, from wild animals by night or day ; whilst the father takes the child in his lap and again touching the several parts of the body listens to the appropriate prayers for strength, wealth and long life. The ceremony ends with a story illustrating its origin. The above fairly represents the character of the mantras used in the ceremonies, and that these are of Tántrika origin and common alike to Buddhism and the Hinduism of the present day may be distinctly shown. Cunningham in his Ladák (p. 384) gives several mantras collected by him from Tibeto-Buddhist sources which in form and character are the same as those in use in the Kumaon Himálaya. Compare his mantra of Śakya Thubba (Buddha) :—*Namaḥ Sámanta buddhánáṃ sarvaklesha niśuddhana sarvva-dharma vahiprapta gagana sama sama sváhá*—'glory to the chief of Buddhas, reliever of all suffering, master of all virtue, equal, equal to the heavens, hail.' Again we have :—*Namaḥ sámanta vajránám chaṇḍa mahároshana hún*—" glory to the chief of Vajras, fierce and greatly hungry, hail " ; and :—*Oṃ vajra—krodha, háyagriva hulu hulu hún phat* —*Oṃ* O wrathful Vajra, flame-necked, *hulu hulu hún phat.* This last 'is addressed to the supreme Buddha (Bhageśwara), to the celestial Bodhisattwas, Padmapáni and Vajrapáni (the lotus and sceptre-bearers) and to the Tántrika divinity Iśwara.' The same ideas permeate the mystical formulæ used by Musalmáns of the lower classes, descendants of Hindú converts, only the names of Jibráil, Azráil, &c., are generally used instead of the names of the Indian and Tibetan spell-compelling deities. In a curious figure given by Herklots we have names derived from all three systems and common to the Tantras of all. It represents the double Nága emblem of the male and female principle, and is used by exorcisers in avoiding the influence of evil spirits. It is shown in Plate I, fig. 2, as giving a fair example of a magic figure and showing how wide practices here referred to are.

Another is addressed to Hanumán, Narasiṃha, Baitála and Bhairava: another is adorned with the *triśúla*, the distinctive emblem of the montane S'aivas, and all are of the same character as the *yantras* used by Hindús.

Namakaraṇa.—The *námakaraṇa* or naming the child takes place on the tenth to the twelfth day after birth. In Kumaon, it is held almost universally on the eleventh day and the ritual opens with a series of somewhat abstruse general rules for selecting names. The Gaṇeśa-*púját* is as usual first performed, stating the particular object for which it is undertaken. Then follows the *Nándí-śráddha* and an oblation to the fire made with clarified butter. Then a mixture called the *pancha-gavya* is formed of the following ingredients:—the urine of a slate-coloured cow, the dung of a black cow, the milk of a copper-coloured cow, the curds of a white cow and the clarified butter of a pie-bald cow. This mixture is made up into small balls and a portion used as a burnt-offering *(homa)*, and the remainder is strewn about the house and byres and also thrown on the mother of the boy to purify her. A *homa* is then made of coins which are thrown into the fire and afterwards become the property of the celebrant. The child's name is next settled and written on a small piece of clean cloth and also whispered in his ear:—"Thy name is so and so, may thou have long life, health and prosperity." Gifts are then made to the celebrant and all retire tothe courtyard, where a figure of the sun, such as already described, is drawn on the ground and reverenced with the usual ceremony. The boy is allowed to see the sun this day and is made to plant his foot on a piece of money placed on the ground (*bhúmi upaveśana*) whilst calling on the names of the deities that hereafter he may be able to esteem money as the dirt under his feet. The party then return to the house, where the *Jíva-mátṛi-púját* is performed. It consists in the rinsing of the mouth followed by the consecration of the *argha* and a dedication as in the *mátṛi-púját*, but the figures are only seven in number and are drawn on the wall of the house, not on wood, and the deities honoured are Kalyáṇi, Mangalá, Bhadrá, Puṇyá, Puṇyamukhá, Jayá and Vijayá. These are worshipped with the usual ceremonies including the invitation, &c., and the *vasordhárá* already described and then gifts are made to Bráhmans.

Janmotsava.—The *janmotsava* takes place on the anniversary of the birth of a male and the ceremony connected with it may be performed either by the person whose birth-day is celebrated or by the family *purohita* on his behalf. In either case the person for whose benefit the rite is performed must rise early in the morning and have his body anointed with a mixture of sesamum, black mustard and water and then bathe in warm water and put on clean clothes. When bathing, a prayer is read which brings in the place and date, his name, caste and race, and

asks for long life and prosperity, and to be truly effective this prayer should be said when the past year of the native's life merges into the coming year. Then the names of the principal deities are repeated in the form of a short litany, and their aid and assistance during the ensuing year are invoked. Should the anniversary fall on a Tuesday or Saturday which are regarded as unlucky days, the ceremony cannot take place, but in its stead, the person who desires to derive benefit from the rite should bestow gifts on Bráhmans and in charity, and in this way he shall obtain all the advantages which the performance of the complete ceremony is supposed to ensure. It is only in this abbreviated form, moreover, that the majority of Hindús in Kumaon observe this rite.

Karṇavedha.—The *karṇavedha* or piercing the ear may, according to the family or tribal custom, take place at any time between the third and seventh year. The rite is said to have been established by Vyása, and the date for its performance is always fixed by the family astrologer. The father of the boy must rise early and perform the Gaṇeśa-*pújá* and state precisely the object by giving place, time, name, &c., and declaring that it is for the increase in length of life, strength, wisdom and good fortune of his son, whose name is also given. He then goes through the *Mátṛi-pújá*, *Nándí-śráddha*, &c., as in the preparatory ceremonies already described. The mother takes the child in her lap and gives him sweetments whilst the operation of piercing the ear is performed: first the right and then the left ear with appropriate mantras, winding up with the usual gifts to the astrologer and *purohita*. Then follows the *abhisheka* or aspersion and the presentation of flowers and the *mahánírájana*, in which the family barber appears with a brazen tray bearing five lamps made of dough, four at the corners of a square and one in the centre in which the wick floats in molten clarified butter. These are waved in the manner of a censer in front of the assembly, who each make an offering to the barber according to his ability.*

Worship of the planets.—The *Upanayana* or ceremony of putting on the *janeo* or sacrificial thread is always preceded by the worship of the planetary bodies. For this purpose a *yajñaśálá* or hall of sacrifice is prepared to the east or north of the house and purified with the *pancha-gavya*,† whilst prayers are read as each article of the mixture is used. As a rule, however, the ceremony is performed in the cow-shed, in the

* I omit the ceremony styled *Aksharasvíkára vidyárambha*, which takes place when a boy first goes to school, as I have never heard of its having been used. It consists principally of an enumeration of all the books, teachers and schools of philosophy known to the compiler with laudatory verses and prayers that they should be present and assist in the ceremony and in the youth's studies.

† Already described.

northern corner of which a very simple miniature altar of three steps* known as the *grahavedí* is raised. On the top of the altar the figure of a lotus with eight petals is drawn and each petal is coloured to represent a planet, red for the sun; white for the moon; reddish-brown for Bhauma (Mars); whitish yellow for Budha (Mercury); yellow for Vṛihaspat or Guru (Jupiter); white for S'ukra (Venus); black for S'anichara (Saturn) and for Ráhu (an eclipse) and brown for Ketu (a comet). For the other deities the intervals between the petals are used. Offerings of rice and curds are then made to each and the usual invitation, &c., are made. On the morning of the day after these preparations have been completed, the usual preparatory ceremonies already described are gone through, including the *Nitya-karma*, Gaṇeśa-*púját*, Mátṛi-*púját*, *Nándí-śráddha* and *Puṇyáha-váchana*. Then the person who causes the ceremony to be performed gives the *tilaka* or frontal-mark to the *purohita* also the *argha*, flowers, rice, sandal and presents of coin, ornaments and wearing apparel and requests him to preside at the ceremony.† The parents of the child with the celebrant and the assembled friends then march round the *yajña-śála* to the sound of conches and other instruments and enter by the western door, when the ceremony of purifying the hall with the *pancha-gavya* is again performed. To the south-west of the *grahavedí* a small *homa-vedí* or altar for burnt sacrifice is built and a fire is lighted thereon.

The worship.—The celebrant then performs the *kalaśa-sthápana* and appoints the *pradhána-dípa* or guardian of the lamp to stand in the east and prevent the lamps going out, lest the ceremony should be interrupted by sprites and goblins. The worship commences by the celebrant presenting to each leaf of the lotus on the *graha-vedí*, a piece of metal stamped with the conventional image of the particular planet to which the leaf is sacred. (Then the greatness of each planet is praised and litanies are read and each is invited to be present in the place assigned to it on the *graha-vedí*.) All face towards the sun and the figure of the sun towards the east. These are then addressed in the *agnyuttáraṇa* and then washed with the five *amṛita*, each ingredient as it is applied being accompanied by a separate mantra. Then cold water is offered and the dedication made with the hymn of praise to:—Oṃkára,

* The lowest step is two finger-breadths high and broad, the next is of the same height but four finger-breadths broad, and the last is four finger-breadths higher than the second and one cubit square at the top.

† Arrangements are made in the ritual for the presence of the Ácháryа, Bráhman, Ṛitwika or prompter and Sadasya, but as a rule all these offices are performed by one person. The ritual for this ceremony extends over eighty pages of my manuscript and is said to occupy three days in recital: it need hardly be said that the full ritual is seldom or never gone through.

Brahmaṛshi, Gáyatrí, Chhandaḥ and the supreme deities; the Vyáhṛiti-mantra, Viśvamitra, Jamadagni, the metres known as the *gáyatrí*, *ushṇi* and *anushṭubh* and the deities Agni, Váyu and Súryya, who are asked to assist in the ceremony. Then the *vyáhṛiti*-mantra is recited separately and together thus:—*Oṃ bhúḥ* I invite and set up the sun; *Oṃ bhuvaḥ* I invite, &c.; *Oṃ svaḥ* I, &c.; *Oṃ bhúr bhuvaḥ svaḥ*, I, &c., and the figure of the sun is placed on a small circular altar erected in the middle of the *graha-vedí*, then the invitation is made with the mantra:—*Oṃ akṛishṇe*, &c. Next Agni is addressed as *adhideva* of the sun, and invited to be seated on his right hand with the *vyáhṛiti*-mantra separately and together as in the case of the sun and also a special mantra for the invitation:—'*Oṃ Agniṃ dútaṃ*,' &c. Next on the left side Rudra is invited as the *pratyadhideva* in the same manner and the invitation mantra commences:—'*Oṃ tryambakaṃ*,' &c. Next in the south-east corner the figure of Soma is set up with a similar ceremony on a small square altar. Next comes Angáraka or Bhauma on a triangular altar, Budha on an arrow-shaped altar, four finger-breadths long, Guru or Vṛihaspati on an altar six finger-breadths square, S'ukra on a five-cornered altar, nine finger-breadths across, S'ani on a bow-shaped altar two finger-breadths broad, Ráhu on a sword-shaped altar, and Ketu on one like a standard. Then the other deities are invited: first the protecting deities, Gaṇeśa, Durgá, Kshetrapála, Váyu, Ákáśa, and Aświní. Then the guardians of the rite, Indra on the east, Agni on the south-east, Yama on the south, Nirṛiti on the south-west, Varuṇa on the west, Váyu on the north-west, Kuvera on the north and Iśa on the north-east. Next Brahma is invited to take his place in the upper part of the central space on the *graha-vedí* and Ananta in the lower portion. Next in the north-eastern corner already sacred to Iśa, the *kalaśasthápana* is made and the figure of Varuṇa is placed on the cover over the mouth of the vessel. All this is supposed to be done with the same tedious ceremony.

The meditation.—The thread from which the bracelet is made (*raksha-sútra*) is now tied round the neck of the vessel (*kalaśa*). Then rice is taken in the hand and sprinkled over all the figures whilst they are asked to come and take their place in the vessel and in the bracelet. Then follows the dedication of the rite to the ceremony about to be performed on behalf of the boy. Next the *dhyána* or meditation is given:—"*Oṃ* who sittest in the position called *padmásana* (*i. e.*, with thighs crossed, one hand resting on the left thigh and the thumb of the other on the heart and the eyes looking towards the nose), with hand like a lotus, sprung from a lotus, who driveth the chariot yoked with seven steeds, two-armed, ever present *Ravi*. *Oṃ* thou who art white, clothed in white garments, driving white horses, adorned with white, bearing a club, two-armed, ready to do what s right, *S'aśi*. *Oṃ* thou with the reddish garland and clothes, bearing

a pike, lance, and club, four-armed, moving like a goat, granter of requests, *Dharâ-suta*. *Oṃ* thou clothed in yellow garments encircled with yellow garlands, sprung from the pericarp of the lotus, club-holder, two-armed, seated on a lion, granter of requests, *Budha*. *Oṃ* Guru of the Devas and Daityas, clothed in white and yellow, four-armed, who grantest the wishes of ascetics, with rosary, thread and alms-dish. *Oṃ* thou who shinest like a sapphire, holding a lance, granter of requests, vulture-borne, arrow-discharger, *Arka-suta*. *Oṃ* thou who art clad in blue, whose body is blue, crested with a diadem, bright, seated on a blue lion, such O *Râhu* is praised here. *Oṃ* thou who art of a brown colour, two-armed, club-wielder, with distorted face, always mounted on a vulture, grantor of desire, *Ketu*." A second meditation of the same import is then prescribed and others for Varuṇa, &c. Then to all the deities named the *âsana*, &c., as far as the flower-offering, are given and Vyâsa is quoted in praise of the nine planets. When procurable, cocoanuts should now be offered with fruit, flowers, and goods as well as the food supposed to be agreeable to each deity: thus for the sun, balls of rice and molasses are provided: the moon receives a *bali* of rice, clarified butter and milk; Bhauma, one made of rice, molasses, clarified butter and milk (*atkarika*); Budha, one made of milk and rice; Vṛihaspati, simply clarified butter and rice; S'ukra, curds and rice; S'ani obtains a mixture of rice, clarified butter and vegetables; Râhu has goat's flesh; Ketu, rice of various colours; whilst the remainder obtain milk and rice. If these different ingredients are not procurable an offering of milk and rice is made to all.

Consecration of the materials for sacrifice.—The celebrant then approaches the *homa-bedí* and looking towards the east makes the usual rinsing of the mouth, and then proceeds through the whole ceremony of consecrating the materials for the sacrifice from the appointment of the Bráhman (*brahmopaveśana*) to the general aspersion (*paryukshaṇa*), after which gifts are made to the celebrant. A kind of preface is then read giving the names of the several deities and the materials with which they should be worshipped. This is followed by the *agni-sthâpana* by which Agni is invited in the different forms in which he is present on the altar as each of the nine planets, receives worship, and the throne, &c., are presented to him. Lines which represent the tongues of flame on the altar are then drawn and adored, and the father of the boy receives fire from the celebrant and bending the right knee so as to allow the thigh to lie flat on the ground before the altar, meditates on Prajápati, and commences the burnt-sacrifices by the offer of the *âghára-homa* with clarified butter. Fuel* (*samidh*) for the altar is supplied from the wood of the following

* The wood of these trees is supposed to be cut up into pieces measuring a span of the hand of the boy who is the subject of the rite. Three stalks of *dûrvâ* or *kuśa* make one *samidh*.

trees and plants :—*Arka* (*Calatropis gigantea*), *Palása* (*Butea frondosa*), *Khadira* (*Acacia catechu*), *Apámárga* (*Achyranthes aspera*), *Pípala* (*Ficus religiosa*) and *Uḍumbara* (*Ficus glomerata*), *S'ami* (*Acacia suma*), *Dúrvá* (*Cynodon dactylon*) and *kuśa* (*Eragrostis cynosuroides*). These pieces of wood and plants must not be crooked, broken, worm-eaten, &., and must be steeped in curds, honey and clarified butter befor they are offered to the nine planets as a *homa*. If the wood of the other trees mentioned is not procurable that of the *palásа* or *khadira* may be used alone. There are three positions for the hand during the homa :—(1) the *mṛigí* (doe), (2) the *haṃsí* (female swan) and (3) *śúkarí* (sow). In the *śúkarí* the hand is closed and the fingers lie in the palm on the hand ; the *mṛigí* extends the little-finger whilst the remaining fingers continue within the palm of the hand, and the *haṃsí* extends the fore-finger whilst the hand is closed. The *mṛigí-mudrá* comes into use in all ceremonies undertaken in order to avoid threatened dangers or the retribution due to evil deeds : the *haṃsí-mudrá* in the rites observed for increase in health, wealth or prosperity, and the *śúkarí-mudrá* in spells for malevolent purposes, in incantations against an enemy and for causing any mental or bodily misfortune to him. If the *homa* takes place without its proper spell (*mudrá*), the offering is fruitless and misfortune shall assuredly occur to both the celebrant and his client.

The oblation.—The *homa* is then offered in the name of each deity with a short dedication and mantra whilst the name of the presiding Ṛishi supposed to be present is given as well as the form of Agni. As this ceremony is gone through forty-two times, the result may be tabulated as follows :—

The nine planets.

No.	Name of deity.	Material employed in the *homa*.	Initial words of mantra.	Presiding Ṛishi.	Form of Agni.
1	Sun ...	*Arka* ...	*Oṃ Akṛishṇe*, &c.	Hiranyastúpa.	Kapila.
2	Moon ...	*Palása* ...	*Oṃ imaṃ devá asapatna gvaṃ*, &c.	Gautama.	Pingala.
3	Bhauma ...	*Khadira*	*Oṃ agnir múrddhá*, &c.	Virúpáksha.	Dhúmraketu.
4	Budha ...	*Apámárga*,	*Oṃ udbudhyasvágne*, &c.	Parameshṭhi.	Jáṭhara.
5	Vṛihaspati,	*Pippala*...	*Oṃ vṛihaspate*, &c.	Gṛitsamada.	Śikhi.
6	Śukra ...	*Udumbara*,	*Oṃ annátparisrutorasaṃ*, &c.	Prajápati, Aśvi, Sarasvatí and Indra.	Hátaka.
7	Śani ...	*Śami* ...	*Oṃ śannodevír abhishṭayaḥ*, &c.	Dadhyaññáthárvaṇa.	Mahátеja.
8	Ráhu ...	*Dúrvá* ...	*Oṃ kayá naś chitra*, &c.	Vámadeva.	Hutáśana.
9	Ketu ...	*Kuśa* ...	*Oṃ ketuṃ*, &c.	Madhuchchhanda.	Rohita.

The Adhidevatás.

For these and the succeeding deities *palásа* is the wood prescribed and no particular form of Agni is mentioned.

Number.	Name of deity.	Initial words of mantra.	Presiding Rishí.
10	Agni ...	*Oṃ agniṃ hútaṃ*, &c. ...	Kaṇva and Medhátithi.
11	Apa ...	*Oṃ aśvantara*, &c. ...	Vṛihaspati.
12	Pṛithiví ...	*Oṃ syonápṛithivi*, &c. ...	Medhátithi.
13	Vishṇu ...	*Oṃ idaṃ vishṇur vichakrama*, &c.	As in 10.
14	Indra ...	*Oṃ sajoshấḥ*, &c. ...	As in 4.
15	Indráṇi ...	*Oṃ adityá*, &c. ...	Ditto 7.
16	Prajápati ...	*Oṃ prajápate*, &c. ...	Hiraṇyagarbha.
17	Sarpa ...	*Oṃ namo' stu sarpebhyo*, &c....	Devás.
18	Brahmá ...	*Oṃ brahmaya jñánaṃ*, &c. ...	Prajápati.

The Pratyadhidevatás.

19	Rudra ...	*Oṃ tryambakaṃ*, &c. ...	Vaśishṭha.
20	Umá ...	*Oṃ śríś cha te lakṣmí*, &c. ...	Uttaranáráyaṇa.
21	Skanda ...	*Oṃ yadakrandaḥ prathama ṇ* &c. ...	Bhárgava, Jamadagni and Dírghatamasa.
22	Purusha ...	*Oṃ sahasra-śirshá purushaḥ* &c.	Asyanáráyaṇa.
23	Brahmá ...	*As in 18* ...	As in 18.
24	Indra ...	*Oṃ trátáraṃ indraṃ*, &c. ...	Gárgya.
25	Yama ...	*Oṃ asi yamaḥ*, &c. ...	As in 21.
26	Kála ...	*Oṃ kárshirasi*, &c. ...	Ditto 15.
27	Chitragupta,	*Oṃ chitrávaso*, &c. ...	Ditto 4.

Other deities.

28	Vináyaka ...	*Oṃ gaṇánán twá*, &c. ...	As in 18.
29	Durgá ...	*Oṃ játavedase*, &c. ...	Kaśyapa.
30	Váyu ...	*Oṃ váto vámano vá*, &c. ...	Gandharvás.
31	Ákáśa ...	*Oṃ úrddhváḥ*, &c. ...	As in 18.
32	Aśvinau ...	*Oṃ yávánkaśa*, &c. ...	Medhátithi.

Dikpálás.

Sesamum and clarified butter are here added to the offering of *palásа*.

33	Indra ...	As in 24 ...	As in 24.
34	Agni ...	Ditto 10 ...	Ditto 3.
35	Yama ...	Ditto 25 ...	Ditto 21.
36	Nirṛiti ...	*Oṃ eshate nirṛite*, &c. ...	Varuṇa.
37	Varuṇa ...	*Oṃ imaṃ me varuṇa*, &c. ...	Śunaḥśepha.
38	Váyu ...	As in 30 ...	As in 30.
39	Kuvera ...	*Oṃ vaya gvaṃ*, &c. ...	Bandhuṛishi.
40	Iśána ...	*Oṃ tam iśánaṃ*, &c. ...	Gautama.
41	Brahmá ...	As in 18 ...	As in 18.
42	Sarpa ...	Ditto 17 ...	Ditto 17.

Should any error occur in naming the deities in the order above given, the entire ceremony must be gone through again, but no penalty

is attached to the use of the materials for the *samidh* in other than the prescribed form.

The position assigned to each deity on the *graha-vedi* will better be understood from the diagram in Plate, I, fig. 2. In the petals of the lotus, the letter 'A' stands for 'Adhideva': the letters 'Pradh' for 'Pradhánadeva' and the letters 'Pr.' for 'Pratyadhideva,' the titles given to each triad. We have next a *homa* of clarified butter with the *vyáhṛiti*-mantra repeated nine times: hence the name *naváhuti-homa.* Another offering of clarified butter is made with the mantra:—'*Oṃ* to Agni who causeth a good sacrifice *sváhá.*' Then a *púrṇa-pátra*, or vessel, is presented to the celebrant with a dedication that all imperfections in the ceremony may be forgiven and the rite be completed.

Balidána.—The *balidána* follows and comprises offerings of milk or rice and curds to the north of the *graha-vedí* or near the *homa-vedí.* A portion of the mixture is taken and placed on a brazen platter or stone in the name of the sun with the address:—'*Bhó bhó* Sun accept this offering; be thou the bestower of long life, the giver of forgiveness, the alleviator of trouble, the giver of good fortune and the increaser of prosperity to thy worshipper.' Above this an offering is placed for the moon with the same address and so on for each of the forty-two deities assembled and to whom a *homa* has been offered. It will be noticed that a *homa* is not offered either to the Kshetrádhipati or the Vástoshpati. To the former, however, a *bali* is presented with considerable ceremony; a mixture of clarified butter and rice known as *khichrí* is placed on a platter of leaves and on it four lamps of wheaten dough with clarified butter for oil and a few coins. Then an ignorant Bráhman or a Sudra is honoured with an offering of sandal which, as a rule, is smeared over his face to make him look hideous. The *dhyána* or meditation on Kshetrapála follows, after which the offering is taken and presented with the mantra.* "Oṃ glory to the venerable Kshetrapála * * * to all sprites, goblins, demons and their followers, glory to this offering of clarified butter and rice with its light, gifts and betel. Hail Kshetrapála * * filled with the howling of the fierce-mouth protect me, eat this offering of *khichrí* with its light prepared for thee. Protect the person who causes this

* *Oṃ namo bhagavate kshetrapálaya* चां चीं चूं चें चैं चः *bhúta-preta-piśácha-ḍákiní-śákini-betáládi-parivárayutáya esha sadípaḥ sadakshiṇaḥ satámbúlaḥ kṛisaránnabalir namaḥ bho bho kshetrapála maru maru, turu turu, lala lala, shasha shasha, phenkára-púrita-diṅmukha raksha raksha grahamakhakarmmaṇi amuṃ sadípaṃ kṛisaránnabaliṃ bhaksha bhaksha yajamánaṃ páhi páhi mama vá saputra-saparivárasya yajamánasya vá, &c.*

ceremony to be made, be for him and his child and those belonging to him, the bestower of long life." &c.

Púrṇáhuti-homa.—After this follows the *púrṇáhuti-homa* in which Bharadvája is the Ṛishi and the deity is Mahávaiśvánara. The offering is prefaced by the usual dedication of time, place, person and object, followed by the hymn in four verses beginning :—'*Oṃ múrddhánaṃ divo*,' &c., and ending with '*Oṃ púrṇá*,' &c., whence the name.

Agni-púját.—The *Agni-púját* comes next in which Agni is addressed on behalf of the boy :—'*Oṃ* Agni thou that protectest the body, protect my body ; *Oṃ* Agni that grantest long life, grant me long life ; *Oṃ* Agni that bestowest energy, bestow on me energy ; complete whatever is deficient in my oblation ; *Oṃ* holy Savitá, accept my sacrifice, holy Sarasvatí accept my sacrifice ; ye twin Aśvins, crowned with lotuses accept my sacrifice.' Then warming his hands in the flame of the altar he applies them in succession to the various parts of his body saying :—" May each member of my body increase in condition." Similarly the mouth, nostrils, eyes, ears and arms are separately addressed to the same intent.

Tryáyusha.—After this the rite called *tryáyusha* for acquiriug the three-fold vital power is celebrated. It consists in the application of the *tilaka* or frontal mark to the head and throat of both the boy for whom the ceremony is performed and his father. The material for the *tilaka* is taken from the ashes of the *homa* and then mixed with clarified butter and applied by the celebrant. This is followed by the distribution of gifts which are divided amongst all the Bráhmans present. But in addition to the ordinary presents suitable to the occasion, the wealthy and devout are instructed that the following are specially acceptable to each of the nine planets :—to the sun, a brown cow ; to the moon, a conch ; to Bhauma, a red bullock ; to Budha, gold ; to Vṛihaspati, yellow clothes and gold ; to S'ukra, a white horse ; to S'ani, a black cow ; to Ráhu, a sword, and to Ketu, a goat. These subsequently become the property of the officiating priests, but it is allowed to commute these gifts in detail for a sum of money which is made over to the priests with the usual dedication of place, time, person and object, and that the money is in lieu of the gifts due to each of the nine planets. All then march around the altar singing :—" *Oṃ*, go, go, best of gods, omnipotent, in thy own home, where Brahma and the other gods are, there go thou Hutáśana." The planets are then worshipped and afterwards the celebrant and his assistants asperses the assembly with water taken from the *kalaśa* whilst chaunting a hymn.* This is followed by a mantra† in

* This is called a Vaidik hymn and commences :—'*Oṃ sarvve samudráḥ saritas tírthání jaladánadáḥ*,' &c. : it contains thirty-four verses.

† Called a Pauráṇika-mantra.

which all the deities are invoked that the aspersion may be fructuous and their protection be extended to all. The *tilaka* of sandal is then given by the celebrant to the men of the assembly with the mantra* :—" *Oṃ*, may it be well with thee, be thou fortunate; may Mahálakshmí be pleased with thee; may the gods always protect thee; may good fortune be always with thee everywhere; may evil planets, sins, impurities and causes of quarrel seeing the mark on thy forehead be powerless to harm thee." The rice is applied with the mantra :—' *Oṃ* may this rice protect thee.' The *tilaka* is given to women merely as an ornament without any mantra, but the rice is applied with the mantra used for men. The mantra-*páṭha* follows, of which twenty-one verses are for the men and three for the women whose husbands are alive at the time; when finished, flowers are distributed to all present. After this the ceremony of fastening on the bracelet (*rakshábandhana*) takes place as described, and the *bhúyasí-dána* with its gifts in which all the dancers and the musicians share. The worship of the planets concludes as usual with a feast to Bráhmans.

Chúṛá-karaṇa.—The rite known as *chúṛá-karaṇa* or shaving of the head is also included amongst those preparatory to the assumption of the sacrificial thread. The favourable moment is fixed by the family astrologer and when arranged for, the father of the boy commences the rite the night before by going through the Gaṇeśa-*púját*. He then takes ten small bags of cloth and wrapping up in them portions of turmeric, *dúb*-grass, mustard and a coin, ties them in the hair of the boy with the mantra :—' To-morrow you will be cut off,' &c. Three are tied on the right side of the head, three on the left side, three at the back of the head and one on the top. The next morning all proceed to the *yajña-śála* in which the *graha-vedí* of the previous ceremony was erected. The duties of the day are opened with the rinsing of the mouth, next the *argha* is set up and consecrated and the *práṇáyáma* is gone through followed by the dedication.

In the last rite, the celebrant defines the object by stating that the ceremony is performed for the *chúṛá-karaṇa* and *upanayana* (initiation) of so and so, the son of so and so, &c. Next follow the whole of the usual preparatory ceremonies as far as the *Puṇyáha-váchana*. The celebrant now approaches the *chúṛá-karaṇa-vedí* and again consecrates the *argha* and makes a dedication to Agni and then lights a fire upon the *vedí* or altar. The father now takes the boy in his arms and the mother seats herself to his left, and all assist in the installation of the altar and the invitation, &c., is gone through as before. Then an offering of clarified butter is thrown on the fire with the mantra :—' *Oṃ prajápa-*

* *Oṃ bhadramas tu*, &c.

taye,' &c., and gifts are bestowed on the celebrant. The hair of the child, except the top-knot, is now cut off whilst an appropriate service is read. The hair is then buried with cow-dung near some water and the boy is bathed and clothed in his best and placed near the celebrant and s held to be entitled to the name *máṇavaka* or religious student. The ceremony as usual winds up with gifts to the celebrant and assembled Bráhmans, replied to by a mantra and the gift of a flower (*áśisha*) as a benediction.

Assumes the garb of a student.—According to the *Páraskarasútra*, the son of a Bráhman may assume the *janeo* at seven or eight years of age, the son of a Kshatriya at eleven years of age and the son of a Vaiśya at twelve years. These limits can be doubled where necessity exists, but the ceremony cannot take place after the second limit has expired. The father and son now approach the *upanayana-vedí* and the boy presents the *tílapátra* to the altar. This *tílapátra* is an iron pot containing sesamum oil in which coins have been placed and which form a portion of the honorarium of the celebrant. The invitation, &c., is again recited and the dedication is made to ensure the success of the young student in his studies. Next follows a formal burnt-sacrifice of clarified butter. The celebrant then receives from the father of the boy a loin-cloth, belt, sacrificial-thread, waist thread, walking-stick and bason for receiving alms and gives them one by one to the boy with the mantra for each. Separate woods are prescribed for the walking-stick according to caste; for the Bráhman, *paláśa;* for the Kshatriya, *bel;* and for the Vaiśya, *gular*. The celebrant then asperses the head and breast of the boy and accepts him as one duly prepared and fit to be raised to the degree of a religious student. The boy next seats himself to the north of the celebrant and his father goes through the Agni-*púját* and offers a sacrifice of clarified butter and presents gifts to the Bráhmans. The title *bhaṭṭa* is given to the student who has assumed the sacrificial thread.

Saluting the religious preceptor.—The astrologer fixes the *lagnadána* or propitious moment for repeating the *gáyatrí*, and when it comes the boy seats himself in front of the celebrant and turning his face towards the north-east salutes the celebrant and presents gifts to his *purohita*. He then crosses his arms and places his right hand on the right foot and his left hand on the left foot of the *purohita* and bows his head down until it touches his hands. The *purohita* then gives the *áśisha* and for a Bráhman reads the *gáyatrí* three times, thus:—

(1) *Oṃ bhúr bhuvaḥ svaḥ tat savitur vareṇyam.*
(2) Repeat first line adding *bhargo devasya dhímahi.*
(3) Repeat both preceding and add *dhiyo yo naḥ prachodayát.*

The Kshatriya *gáyatrí* is as follows :—

Oṃ devasya savitur matim ásavaṃ viśvadevyaṃ dhiyá bhagaṃ manámahe.

The Vaiśya *gáyatrí* is as follows :—

Oṃ viśvá rúpáṇi prati munchate kaviḥ prásávíd bhadraṃ dwipade chatushpade vi nákam akhyat savitá vareṇyo 'nu prayáṇam ushaso virájati.

The boy again brings presents and falls at the feet of his *purohita* and prays that with his teacher's aid he may become a learned man. The *purohita* then instructs his pupil in the *sandhyá*, already described. Next the *samidh* or small faggot of sticks from five trees previously mentioned is taken by the boy and with one of the pieces he touches his eyes and then dips one end of it in clarified butter and again the other and then places it on the fire on the altar. Similarly the ears, nose, hands, arms, forehead, lips, and breasts are touched in order and the stick are burned. The celebrant then performs the *tryáyusha* by applying the frontal and throat-marks with the ashes of the *homa* and clarified butter. The boy then goes through the *daṇḍawat* or salutation as already described and again receives the *áśisha*. He then addresses Agni, stating his name, caste, parentage, &c., and asks the deity to take him under his protection and again prostrates himself before his *purohita*, who usually delivers a homily on general conduct. The boy then begs from his friends and presents the results to his *purohita* saying :—" O Mahárája accept these alms which I have received."

Vedárambha.—Then commences the rite connected with the first study of the Vedas, the *Vedárambha*. Gautama has said that the Veda of the division to which the student belongs should first be read by him. The celebrant prepares the altar called the *Vedárambha-vedí*, for which the usual Gaṇeśa-*púját* is performed and a fire is lighted thereon. The flame is then fed with the numerous offerings made in the names of the deities invoked to be present and assist, for whom the whole invitation, &c., is repeated, followed with the usual gifts and dedication. Then comes the worship of the Vedas themselves with invitation, &c., followed by the worship of Gaṇeśa, Sarasvatí, Lakshmí and Kátyáyana, accompanied with the usual installation address (*pratishṭhá*), invitation, &c. Then the boy looking towards the north-east performs the *práṇáyáma* and recites the *gáyatrí* and mantras in honour of the four Vedas, commencing with that belonging to his own division. He next recites the *mahávyáhṛiti* with the *gáyatrí* three times, *i. e.*, the *gáyatrí* with the *namaskára* :—" *Oṃ bhúr, Oṃ bhuvaḥ, Oṃ svaḥ.*" He is then told to go to Benares and study there and for form's sake actually advances a short distance on the road and then returns, when the ceremony is closed with the usual distribution of gifts.

Samávartana.—Next comes the *samávartana* (returning home after finishing his studies) which commences with the gift of a cow to the celebrant. The boy takes hold of the cow's tail with one hand and holding water in the other repeats a short formula and gives the cow to the celebrant. There is in this rite also an altar or *vedí*, the consecration of which takes place exactly as in the previous rite. The father, son and celebrant approach the altar and the son coming forward and laying hold of his right ear with his left hand and his left ear with his right hand (*vyastapáṇi*) says, he has ceased to do evil and wishes to learn to do well. The celebrant answers "may you have long life." The celebrant then asperses the boy and his relatives from the water of the *udakumbha* or small vessel for holy-water usually placed near the *kalaśa*, and subsequently takes whatever water remains and pours it through a metal sieve called *sahasradhárá* on the head of the boy. These operations are each accompanied by a mantra, as also the taking off of the belt (*mekhala*) and the applying of the *tilaka* to the twelve parts of the body:—(1) the forehead in which Keśava resides; (2) the belly with Náráyaṇa; (3) the heart with Mádhava; (4) the right side with Vishṇu; (5) the left side with Vámana; (6) the hollow below the throat with Govinda; (7) the right arm with Madhusúdana; (8) the left arm with S'ridhara; (9) the root of the ears with Trivikrama; (10) the back with Padmanábha; (11) the navel with Dámodara, and (12) top of the head with Vásudeva. The boy then clothes himself, and the celebrant repeating appropriate mantras directs the boy to remain pure for three whole days, *i. e.*, not touching a Súdra or a dead body, &c. On the fourth day they again assemble, and the *homa* known as *púrṇáhuti* is made, and again the entire ceremony of consecrating the *graha-vedí* is gone through as well as the worship of the nine planets and *jívamátṛis*, and the boy's sister or mother performs the *mahánírájana* (waving of lights) before him, and all winds up with the usual gifts and a feast.

Viváha-karma.—The ceremonies connected with marriage come next and occupy no inconsiderable place in the services. They include those arranged in the following five divisions:—

(1) Agni-*pújá*; clothing, perfuming and anointing the body; the *purohita* of the boy shall then ask the other the name and caste of the girl and communicate the same information regarding the boy.

(2) Presentation of a cow and coin in honor of the girl: procession from the house to the *agni-vedí*.

(3) Invitation to the father of the bride and formal conclusion of the arrangements; then circumambulation of the fire-altar aud performing the *kuśa-kaṇḍiká*.

(4) The bride sits to the right, and the bridegroom sits to the left close together, while a *homa* is made.

(5) Next follows the *saṃśrava-prášana*, *púrṇapátra*, gifts to Bráhmans, and the verses suited to the ceremony.

Vágdána.—Commencing with the first group we have the *vágdána-vidhi* or rules for the preliminaries to a marriage. Some days before the wedding takes place the father of the girl performs the Gaṇeśa-*púját* and the dedication declaring the object to be the correct and successful issue of the *vágdána*, with detail of his own caste, name, race, and that of the boy to whom he has given his girl. The girl then performs the Indráṇi-*púját* (one of the divine mothers) before a likeness of that deity drawn on gold or other metal. Next day the *sarvvárambha* or the beginning to collect the materials necessary for the wedding takes place. The father of the bride takes a mixture of turmeric and *láhí* (parched grain) with water and anoints the body of the girl and performs the Gaṇeśa-*púját*. The same is done by the father of the boy to the boy, and in addition he takes three small bags (*poṭalí*) of cloth containing coin, betel, turmeric, *roli* (powder on the seeds of *Mallotus phillipinensis*) and rice,* one of which is buried within the hearth where the food is cooked; a second is suspended from a handle of the *karáhí* or iron-pan in which the food is cooked, and the third is attached to the handle of the spoon. The object of these proceedings is to keep off ghosts and demons from the feast. Thin cakes are prepared of wheaten flour (*sunwála*) and thicker cakes (*púrí*) of the same, which, with sesamum and balls of a mixture of rice-flour, ghí, and molasses (*laddú* and *chhol*) are made by the women.

First visit.—Next comes the *púrvánga* which takes place on the day before or on the morning of the wedding. The parents of both children, each in their own house, commence with the Gaṇeśa-*púját*, followed by the *Mátṛi-púját*, *Nándí-śráddha*, *Puṇyáha-váchana*, *Kalaśa-sthápana* and *Navagraha-púját* as already described. The parents of the girl seldom perform more than the first two, and remain fasting until the *Kanyá-dána* has taken place. The father of the girl then through his daughter adores Gaurí, Maheśwarí, and Indráṇí, and ties a *poṭalí* on her left hand. The father of the boy binds a similar bag on the right wrist of the boy, and also on the left hand of the boy's mother. Four days afterwards the bags are removed. On the morning of the wedding day the family astrologer sends a water-clock, to mark the exact moment, with other presents to the father of the girl, and declares his intention of being present with the marriage procession at a certain hour. The boy is then

* These are the contents of the *poṭalí* commonly used, though a much more elaborate inventory is given in the ritual.

dressed in his best, perfumed, anointed, and painted and placed in a palanquin, and, accompanied by the friends of the family and musicians, he sets out for the bride's house. He is met on the road by a deputation from the bride's father, conveying some presents for the bridegroom, and near the village by a relative of the bride, who interchanges further presents. The procession then halts for rest whilst dancers and musicians exercise their craft. All then proceed to the house of the bride, where a clean-swept place opposite the principal entrance has been decorated by the women of the family with rice-flour and red sanders. On this place the celebrant and parties to the ceremony with their fathers and principal relations take their place, whilst the remainder of the procession stand at a respectful distance. Next comes the *dhúlyargha* which commences with the consecration of the *argha*. Then the father of the bride recites the *baraṇa sankalpa*, dedicating the rite to the giving of his daughter to the bridegroom, after which he offers the water of the *argha* to the celebrant who accompanies the bridegroom, as well as water for washing his feet, the *tilaka* with flowers and rice, and the materials necessary for the ensuing ceremonies. Similar offerings are made to the bridegroom; and his father is honoured with flowers and the *áśísha*, and all sit down to a feast.

The marriage hall.—The near relatives of the parties then assemble in the marriage-hall. The bride is placed looking towards the west and the bridegroom towards the east with a curtain between them, whilst the fathers of each perform the Gaṇeśa-*pújá*. The bridegroom's father sends a tray of sweetmeats *(laddú)* to the girl's father, on which the latter places flowers and returns the tray to the boy's father. The bride's father then washes the bridegroom's feet and fixes the *tilaka* on his forehead. Again the girl's father sends a tray of sweetmeats which is accepted and returned adorned with flowers. The bridegroom then performs the *áchamana* and receives from his father-in-law a tray of sweetmeats *(madhuparka)* made from honey, &c. He should then taste a portion of them, and say that they are good and express his thanks for the present. He then washes his hands and rinsing his mouth performs the *práṇáyáma* and sprinkling of his body with the right hand merely and the usual mantra. The bride's father takes a bundle of *kuśa* grass in the form of a sword and calls out "bring the calf:" the bridegroom says, "it is present."* Then water is sprinkled over the figure of the calf and several mantras are read, and as in the Kali-Yuga the slaughter of cows is prohibited, the figure is put aside and gifts are substituted.

* As a rule in Kumaon, the figure of a calf made in dough or stamped on metal is produced.

Verification of family.—In the meantime, a Bráhman of the bridegroom's party prepares the altar, consecrates it, and lights the fire. The bride's father then gives four pieces of cloth to the bridegroom and he returns two for his bride. The bride's father then raises the curtain and allows the parties to see each other. Then the celebrant on the girl's side, after reading the *ásírváda* verse,* asks the celebrant on the boy's side the *gotra*, *pravara*, *śákhá*, *veda*, ancestors for three generations, and name of the boy. The celebrant on the boy's side recites a similar verse and replies to the questions asked, winding up with a request for like information as to the girl's family, which is given. The questions and answers are repeated three times, the verses alone being changed. This section of the rite winds up with the usual gifts, and dedicatory prayers and a *homa* of four sweetmeats, two from the bride's house offered by the bridegroom and two from the bridegroom's house offered by the bride.

The giving away.—At the exact time fixed for giving away the girl, the bride's father turns his face to the north, whilst the bride looks towards the west. The father then extends his hand and the girl places her hand (palm upwards) in her father's hand with fingers closed and thumb extended, and holding in the palm *kuśa*-grass, sesamum, barley and gold. The boy takes hold of the girl's thumb, whilst the mother of the girl pours water on the three hands during the recital of the dedication by the celebrant. This portion of the rite concludes with the formal bestowal of the girl generally called the *kanyá-dána*. When this is concluded the girl leaves her father's side of the hall and joins her husband, when the *dánavákya*† is read, and the father of the bride addresses her and prays that if any error has been committed in bringing her up it may be forgiven. Next an address with offerings is made by the bridegroom to his father-in-law, thanking him for the gift of his well-cared-for daughter. In return the father declares the girl's dowry, and the clothes of the two are knotted together. Then come the usual gifts, aspersion, and offering of flowers. The bride and bridegroom then proceed to a second altar‡ which is usually erected outside the marriage hall and whilst mantras are recited by the celebrant circumambulate the outer circle.

The circumambulation.—This being done the *ághára-homa* follows which comprises twelve offerings conjointly made by bride and bride-

* In praise of Hara and Hari.

† Containing four verses from the Puráṇas.

‡ This altar is about a cubit square and is surrounded by a hedge of branches of the sacred trees connected together with twine, outside which the circumambulation takes place either three, five, or seven times.

groom, the former of whom holds her husband's arm whilst he places each offering on the altar and the celebrant recites the prescribed prayers. Next come the usual gifts and returns in flowers and rice. Then follows the *ráshṭrabhṛit-homa*, which also consists of twelve offerings, conjointly made, winding up with presents as before. Also the *jayá-homa* with its thirteen offerings, the *abhyátána-homa* with its eighteen offerings, the *panchaka-homa* with its five offerings and the *lájá-homa* with its offerings of flowers and fruit. Then the altar is again circumambulated and parched rice spinkled from a sieve on the pair as they move slowly around. The bridegroom then lifts the bride and places her a short distance apart, when her brother approaches and gives her some parched rice with which she makes a *homa*. The bridegroom then asperses his bride with water from the *kalaśa* whilst repeating the mantra :—"*Oṃ ápaḥ Śiváḥ śivatamáḥ*," &c., and also touches her chest and head with appropriate mantras. She then goes to the left of her husband and lays hold of his garments, and whilst another mantra is read, the *brahma-homa* is made by the bridegroom. The bride then washes her husband's feet, who in return makes her a present, and each applies the *tilaka* to the other and eat curds and molasses together. After washing of hands the *púrṇápátra* takes place, in which forgiveness is craved for all defects in the ceremony or in the amount of gifts, &c., and the *mantra-patra* or leaf is placed on the bridegroom's head by the celebrant with the prayer that he may be well and have long life, and for this the celebrant is again rewarded. Then follows aspersion, the giving and receiving of the *tilaka*, &c., and the bridegroom is told to look well at his bride. A homily is now given regarding their conduct, the one towards the other, that they should above every thing keep themselves pure for three nights or until the *chaturthí-karma* had taken place. The party then proceed in doors and the Gaṇeśa-*púját*, *jivamátṛi* and *vasoddhára* rites are performed; the *mahánírájana* also takes place by the bride's mother, who presents sweetmeats and opening the knot in their garments gives a portion of the sweetmeats to both bride and bridegroom, who then retire.

Dwára-mátṛi-púját.—Next morning the young married couple arise early and after domestic worship again tie their garments together and perform the *dwára-mátri-pújá* at the bride's father's home. The door-leaf is cleaned with rice flour and on it figures of the Mátṛis are drawn and reverenced conjointly, the bride assisting by holding her husband's arm. Again she alone prepares the threshhold and performs the *dehaliya-púja*, by sprinkling rice and flowers. After breakfast both proceed to the bridegroom's house, where in the presence of a child who bears on his head a small loṭá of water with a green branch on it, indicative of prosperity, he formally commits his wife and her dowry to the safe keeping

of his mother. The *dwára-mátṛi-púját* again takes place and after entering the house the Gaṇeśa-*púját* is performed with the dedication that the moment may be propitious and the usual gifts, &c., winding up with the *mahánírájana* by the sister of the bridegroom and the aspersion of the assembly by the celebrant. After this gifts are distributed and all the attendants are permitted to disperse.

Chaturthí-karma.—On the fourth day the *chaturthí-karma* takes place, which consists of the usual preparatory ceremonies followed by the removal of the *potalí* or small bags from the wrists of the bride and bridegroom preceded by a *homa púrṇapátra* which concludes the ceremony.

Dwir-ágamana.—The next ceremony is the *dwirágamana* or 'second-coming.' The instructions direct that on a propitious day the boy's parents shall cook certain cakes called *phenika* and placing them in a basket, the boy proceeds with them to his father-in-law's house, where he salutes all the family and presents the food. Early in the morning he performs the Gaṇeśa-*púját* and at a favourable time places his wife near him. The *tilaka* is then interchanged between him and the relatives of his wife and formal salutations take place. He then takes his wife and whatever portion of the dowry that is now given to his own house, and on arriving at the threshhold the garments of both are again knotted together. Both are then seated together and the husband rinses his mouth, consecrates the *argha* and performs the *práṇáyáma* and dedication to the *dwirágamana* and the *dwára-mátṛi-púját*. Gaṇeśa and the Mátṛis are then worshipped and the fixing of the favourable time is again gone through that the whole rite may be undertaken at the auspicious moment and be free from defects. Gifts are then made to the family *purohita* and astrologer as if to the deity, and the couple go within while the *svastiváchana* is read. On enteriug the inner apartments the young couple worship the *Jíva-mátṛis* whose figures are drawn on the walls. The *kalaśa* is then consecrated and the couple circumambulate the vessel and the usual offerings and dedication are made; winding up with the aspersion, after which the knots on the garments are untied and the couple feast and retire to rest.

Arka-viváha.—Should any one desire to marry a third time, whether his other wives are alive or not, he must go through the ceremony known as *arka-viváha* or marriage to the *arka* plant (*Calotropis gigantea*). The aspirant for a third marriage either builds a small altar near a plant of the *arka* or brings a branch home and places it in the ground near an altar. He then goes through all the preparatory ceremonies and also the Súryya-*púját* with its invitation, &c., and *prárthana* or adoration with hands clasped and appropriate mantras. He then circumambulates the altar and asks the caste, &c., as in the regular ceremony; a purohita

answers on the part of the *arka* that it is of the Kaśyapa gotra, the great-granddaughter of Áditya, the granddaughter of Sava and the daughter of Arka; then follows the caste, name, &c., of the real bride. A thread is then wound ten times around the *arka*, accompanied each time by a mantra, and again around the neck of the *kalaśa*. To the north of the *arka*, a fire-altar is raised and the *ághára-homa* is made to Agni with gifts and dedication. Next comes the *pradhána-homa* with the mantras, "*Oṃ sangobhiḥ*" and "*Oṃ yasmaitváká;*" the *vyáhṛiti-homa* with its own mantra and the *bhúrádi-naváhuti-homa* with its nine mantras closing with the *púrṇápátra* and dedication. After this a second circumambulation follows and a prayer and hymn. Four days the *arka* remains where it has been planted, and on the fifth day the person is entitled to commence the marriage ceremonies with his third wife. If, however, she be already a widow, he can take her to his home without any further ceremony.

Kumbha-viváha.—The *Kumbha-viváha* or marriage to an earthen vessel takes place when from some conjunction of the planets the omens for a happy union are wanting, or when from some mental or bodily defect no one is willing to take the boy or girl.* The ceremony is similar to the preceding, but the dedication enumerates the defects in the position of the planets in the worshipper's horoscope and states that the ceremony is undertaken to avoid the malign influences of the conjunction of the adverse planets or of the bodily or mental defects of the native as the case may be. The nine planets are honoured and also Vishṇu and Varuṇa, whose forms stamped on a piece of metal are amongst the furniture of the ceremonial. The *aṅchala* or border of the garment used in the knot-tying is represented by connecting the neck of the girl or boy with the neck of the vessel, when the aspersion is made from the water of the *kalaśa* with a brush made of the five leaves.

Casual ceremonies. On killing a snake.—Several ceremonies are prescribed for alleviating (*śánti*) the evil effects of accidents, bad omens, portents, unlucky acts, &c., which may be briefly noticed here. Thus, if in ploughing, the share injures or kills a snake, a short ritual is prescribed to appease the lord of the snakes. Gaṇeśa, the Mátṛis and Kshetrapála are first worshipped on the spot: then the figure of Mṛityuñjaya is drawn on cloth and with it that of the snake-god, and both are worshipped with the invitation, &c., and the *sarpa*-mantra is recited and a *homa* made.

Death of a plough-bullock.—One-sixteenth of the value of the cattle

* The *Vishṇu prátimá-viváha* is similar to the *Kumbha-viváha*. The girl is first married to a picture of Vishṇu in order to avert the influence of the planets when the conjunction of the latter would show her to become a widow or a bad character.

should be paid as a devadaṇḍa to Bráhmans. Another ceremony known as the *vṛishabha-patana* takes place when a bullock dies or is injured while ploughing.

Unlucky conjunctions.—It is believed that if the *megha-sankránta* comes within the conjunction of the planets noted in the horoscope, the native will die within six months, and similarly if the *túla-sankránta* come within the horoscope the native dies before the next *megha-sankránta*: to avert these evils a special ritual is prescribed in which Govinda is the principal deity invoked. A more elaborate service takes place on the occasion of an eclipse when numerous articles are placed in the *kalaśa* and the image of the snake-god stamped on metal is worshipped and the usual gifts are made.

Born again from a cow's mouth.—The ceremony of being born again from the cow's mouth (*gomukha-prasava*) takes place when the horoscope foretells some crime on the part of the native or some deadly calamity to him. The child is clothed in scarlet and tied on a new sieve which is passed between the hind-legs of a cow forward through the fore-legs to the mouth and again in the reverse direction signifying the new birth. The usual worship, aspersion, &c., takes place and the father smells his son as the cow smells her calf. This is followed by various burnt-offerings and the usual gifts, &c.

Dentition, &c.—Ceremonies are also prescribed when the teeth are cut irregularly, when the father and son are born in the same lunar mansion, when three children are born at the same time or in the same lunar mansion, when snakes are seen *in coitu*, when a dog is seen during a ceremony, when a crow evacuates on one's clothes, on seeing a white crow, when gifts of land, money or grain are made, and when building a house, &c.

Múla-nakshatra.—The misfortunes that are supposed to follow any one born in the *Múla-nakshatra*, which is presided over by Nirṛiti, the goddess of evil, are such that the parents are advised to abandon such a child, whether boy or girl, or if not, to go through the ritual prescribed for the occasion with great care and circumspection. The *Múla-śánti* commences with the Gaṇeśa-*púját* followed by the setting up of the *argha* and the dedication. The sesamum, *kuśa*, barley and water are taken and the *pradhána-sankalpa* is recited and also the *Mátṛi-púját*, *Puṇyáha-váchana* and *Nándí-śráddha* are gone through. The celebrants are then appointed and duly reverenced and the person who causes the ceremony to be performed stands before them with the palms of his hands joined together in a submissive attitude and asks them to perform the rite according to rule. The celebrants consent and proceed to the *gṛihaśálá*, or as usual in Kumaon to the place where the cows are tied up. A place

is selected and purified either with holy-water (*i. e.*, water which has been consecrated by using the names of the sacred places of pilgrimage) or the mixture called *pancha-gavya*. To the south-west a hollow is made and a fire is lighted therein, and this is followed by the ritual contained in the formal appointment of the Bráhman to the aspersion. An altar is then made, and on the top a lotus of twenty-four petals is drawn and coloured and named as described below.*

A handsome metal vessel is then placed in the midst of the figure and four other vessels are placed one at each corner of the principal altar. A figure of Nirṛiti stamped on metal is placed in the centre of the altar on its vessel and small pieces of gold, silver and copper on the other vessels after having been washed with the five nectars applied with the usual mantras. Next comes the address to Nirṛiti prefaced by the *vyáhṛiti* mantra :—'Come hither and remain here O Nirṛiti mistress of the *Múla-nakshatra*, grant our requests and accept our reverence.' Her companions and the twenty-four deities residing in the petals of the lotus are similarly invited with the same fermula.

Three of the vessels are dedicated to Brahmá, Varuṇa and the nine planets who are invited to attend. Then the medidation on Nirṛiti and the deities to whom the altar is dedicated follows :—'Nirṛiti, black in colour, of beautiful face, having a man as thy vehicle, protectress, having a sword in thy hand, clad in shining robes adorned with jewels.' A similar short meditation on Indra and Toya is given and for the remaining deities, the recital of their names is held sufficient. Nirṛiti then receives the formal invitation, &c., with the mantra :—'*Oṃ moshúṇa*,' &c., whilst the others are merely named. Then those deities invited to occupy the three vessels above named receive the invitation, &c., and commencing with Nirṛiti all are in order worshipped with flowers, sandal and water. The vessel placed to the north-east of the altar is dedicated to Rudra, and on it are laid the five varieties of *svastika* and below it, a *droṇa* of grain. On the covered mouth of the vessel the image of Rudra

* The name on the petals is that of the initial letters of the *nakshatra* or lunar mansion, above which is the name of the regent of the mansion and below the colour which should be given to it. The names in order commencing with the mansion over which the Viśvadevás preside are as follows :—

1. Uttará-Ashádhá.
2. Śravaṇa.
3. Dhanishṭhá.
4. Śata-bhishaj.
5. Púrva-bhádrapadá.
6. Uttara-bhádrapadá.
7. Revatí.
8. Aśviní.
9. Bharaṇí.
10. Kṛittiká.
11. Rohiṇí.
12. Mṛiga-śiras.
13. Árdrá.
14. Punarvasú.
15. Tishya.
16. Áśleshá.
17. Maghá.
18. Púrva-phalguní
19. Uttara-phalguní.
20. Hastá.
21. Chitrá.
22. Svátí.
23. Viśákhá.
24. Anurádhá.
25. Jyeshṭhá.
26. Múla.
27. Púrvásháḍhá.

} In the middle.

stamped in metal is placed after being washed in the five nectars as before followed by the dedication, meditation, hymn of praise and invitation, &c. Then the *anga-nyása* to Rudra is repeated six times, and the *Rudrádhyáya*, eleven times, &c., &c. Next incense formed from the burnt horns of goats is offered to Nirṛiti and also wine, barley-cakes, flesh and the yellow pigment from the head of a cow (*go-rochaná*); flesh, fish, and wine, however, should not be used by Bráhmans, who should substitute milk with salt for wine and curds with salt for flesh. Lamps are now waved to and fro before all the deities and a fire is lighted on the altar and a *homa* made. Next the *ághára-homa*, the *kṛisara-homa*, the fifteen-verse *homa*. fuel, rice, &c., with the *śrí-śukta* mantra, the *páyasa-homa*, *púrṇá-huti-homa* and the *agni-homa*, are made, after which the fire on the altar is extinguished and Agni is dismissed. The vessel on the principal altar sacred to Nirṛiti is now filled with various materials and whilst these are stirred round several mantras are recited. The parents of the child and the child then bathe outside in a place prepared for the purpose and ornamented with *svastikas* and all are sprinkled with holy-water. Some hundred verses are then repeated with the prayer that the evil influences due to birth in the *Múla-nakshatra* may be effectually prevented. A similar ceremony is performed on account of any person born in the *Áśleshá-nakshatra*.

(*To be continued.*)

On the Psychological Tenets of the Vaishṇavas.—*By* Rá'jendralá'la Mitra, LL. D., C. I. E.

What was the ontological doctrine which Chaitanya inculcated? is a question which was lately put to me by a distinguished European scholar. It is one which has not yet been discussed in any English paper that I am aware of. Nor is it well understood by the Paṇḍits of Bengal. Even among the Vaishṇavas of the higher orders there seems to be considerable differences of opinion, and distinguished commentators on the Bhágavata and other leading texts of the Vaishṇavas have propounded such contradictory and at times diametrically opposite theories that several polemical tracts had to be written on the subject. I have lately found one of these. It is entitled *Sarva-sampradáyabheda-siddhánta*. In it an attempt has been made to reconcile the theories of the different sects of the Vaishṇavas and of Sankara Áchárya. Its author's name is unknown to me, but the author was evidently a distinguished scholar, thoroughly conversant with the leading topics of Indian Philosophy and the various arguments which Vaishṇavas of different schools brought to bear upon

the question. A brief analysis of the work may not, therefore, be unwelcome to the readers of this Journal.

The writer of the work naturally takes for granted that his readers are perfectly familiar with the values of the technical terms and the bearings of the various schools of thought in this country, and therefore plunges at once *in medias res*. This course, however, will not be convenient for English readers, and it is necessary, therefore, to preface this note with a few words on the leading Indian theories on soul, as a spiritual, self-conscious monad, distinct from the body, and concentrating in itself all the purest and most refined of human excellences—a spirit distinct from the entelechies of Aristotle.

These theories may be described under three heads: 1st, Nihilistic; 2nd, Monistic; 3rd, Dualistic.

The first is represented by the Chárvákas, who deny the existence of a soul. Like the Pessimists of this century they say there is no psyche. They hold that the soul, or the spiritual principle which vivifies and sensitizes living beings, is, like the body, derived from the parents, and dies with it. This means that vitality and consciousness are the results of organization, and cease with the complete ataxy of that organization. In other words, there is, apart from the body, no distinct essence, which, in association with matter, gives it life, and, dissociated from it, lives on, either to vitalize other bodies, or in an ethereal or spiritual form. The most essential attribute of this soul is its immortality, and most Indian philosophers add to it eternity, and these being wanting in the doctrine of the Chárvákas and other atheists, it is rightly called Nihilistic. One school of Buddhists, and that the most important, professes a modified form of this nihilism, allowing the soul functional existence for æons, but reducing it to ultimate vacuity from which it is held to arise. This is called *Súnyaváda*, 'the theory of vacuity,' or *Asadváda* 'the theory of non-existence.' None of these, however, is accepted by any leading Vaishṇava school of thought, and need not, therefore, be noticed at greater length here.

The second head resolves itself into two divisions—1st, Generically Monistic; 2nd, Absolutely Monistic. Those who entertain the theory implied by the first division hold that every living being has a separate soul, which is uncreate and immortal. It is consciousness itself, and spiritual in nature, but defined in character, no one soul merging into, or bearing any relation to, another, and yet it is essentially so identical with one and another, that as a genus all souls are exactly alike, and as such there is perfect unity. Unity is also predicated of this soul on the ground of there being no species of soul of any other kind, and thereby is meant that there is no Divine or Supreme soul. In fact it is with a

view to deny a supreme intelligent Creator and Preserver of the universe that unicity is insisted upon in regard to the soul of created beings. The founders of the Sánkhya and the Jaina doctrines, as also some Bauddhas are the followers of this theory. They hold that this soul, though consciousness itself, is, in its ordinary state, so worked upon by its own energy (variously called *Máyá* 'illusion,' *Śakti* 'power,' *Prakṛiti* 'nature,' *ajñána* 'ignorance,' &c., but meaning in reality the laws of nature) that it does not thoroughly perceive itself. It is the *ego* in a more or less latent, or potential, or mystified state, subject to various malign and beneficent influences which some times make it more and more mystified, and at other times less and less so; its aim, however, is to separate itself from its energy, or to shake off its unintelligent condition, and in course of time under the influence of its beneficent environments and earnest exertion gradually becomes more and more manifest, until at last its beclouding energy melts away, and the soul abides in its perfect purity. This melting of the energy may be compared, and in fact is substantially the same, with the progressive evolution theory of the modern European schools, except that the European Progressionists (or most of them) assume a beginning, or a first start, whereas their Indian congeners believe the universe to be uncreate and eternal. This state of perfect purity is the *summum bonum* which the Sánkhyas and the Jains look upon as *mukti* or final deliverance, and the Bauddhas as *Buddhahood* or *Nirváṇa* 'perfect Intelligence,' or 'absolute quietude.' The goal of the Progressionist is thus eloquently summarised by Browning :—

> "I, that trace Providence without a break,
> I, the plan of things, drop plumb on this plain truth—
> That man is made in sympathy with man,
> At outset of existence, so to speak;
> But in dissociation, more and more,
> Man from his fellow, as their lives advance
> In culture; still humanity that's born
> A mass, keeps flying off, fining away,
> Ever into a multitude of points,
> And ends in isolation, each from each:
> Peerless above in the sky, the pinnacle,—
> Absolute contact, fusion all below
> At the base of being."

Had Browning meant this for the Yogís, it would have been as correct as it is for the Progressionists, omitting only the first four lines in which the idea of Providence and first creation has been sketched, but

which do not at all bear upon the final "Isolation."* The final stage in either case is a society of immortal beings, each physically, morally, and intellectually perfect, and from this perfection *ex concesso* identical. Some Indian writers do not, however, look upon this theory of unicity as satisfactory, and reckon the doctrine as a form of duality or *Dvaitaváda*. What they mean is that it is a system not of one, but of more than one, soul. This is true enough, and logically following it out, the term for it should imply plurality, and not duality, particularly in the Sanskrit language, where the dual does not mean plural. In the case of the Sánkhyas, it has further to be noted that they do not absolutely deny a supreme soul, but hold that there is no proof of the existence of such a being. In other words they are agnostics in this respect.

The Absolutely Monistic theory discards the idea of a separate individual soul for each being, as illogical and unphilosophical. Following the principle that two causes should not be assumed where one is sufficient, it repudiates the assumption of an uncountable number of soul monads, each uncreate and eternal, and holds a single soul, the Supreme Soul, as amply sufficient for all purposes. It is more consonant with reason, and at the same time it removes the stain of atheism which the preceding theory necessarily involves.

The idea of a spirit distinct from the body is of remote antiquity. In the earliest stage of human society every unintelligible phenomenon was accounted for by the assumption of a supernatural power or spirit, and the disposition of that spirit, as malevolent or beneficent, regulated the character of the phenomenon. This idea, once formed, multiplied rapidly, and every mountain and every plain, every wood and every tree, every pool and every river, was soon peopled by its appropriate spirit. These spirits could not, however, be accepted to be equally powerful, and in course of time and advancing reason, it was felt that the more powerful of these must be the rulers or governors of the less powerful, and the ultimate logical resultant was the assumption of one supreme God. God, thus evolved, did not negative the existence of the spirits and the soul of man, but took His place at the head of them all, and mankind at large was perfectly satisfied with this evolution. The theory did not, and could not, jar against their preconceived notions and universally spread beliefs, it bore no taint of atheism, and reason was in its favour. Philosophers, however, did not continue to rest satisfied. The process of thinking which brought them to one God pushed them still onward, and they at last abandoned the theory of separate souls for separate beings, whether

* The Hindu idea of isolation will be found fully described in my translation of the Yoga Aphorisms of Patanjali.

human or celestial, and took to a single soul which gave vitality and consciousness to all. This is the theory of Absolute Unity, and is known under the name of *Advaitaváda* or the theory of 'Nonduality,' or 'Aduality.' From its very name it is obvious that it is subsequent to belief in Duality, or of one Supreme Soul on the one side and of many individual souls on the other. Had unity been the only idea to express, the term would have for certain been formed of a Sanskrit word implying *one*, and not a derivative of *two* with a negative particle before it. It was to exclude the idea of *two* which was current, that recourse was had to the circumlocutory forms of "not two" *advaita*, "one without a second" *ekamevádvitíyam*, and so forth. These forms gave greater emphasis to the idea than what a simple statement of one would have done. Indeed, a term implying *one* would leave room for doubt as to whether the unity applied to the especial character of the soul or to its numerical individuality, and this is precluded by these negative forms.

The Upanishads dwell very largely on this idea. When Nachiketá, in the Kaṭha Upanishad, repeatedly urges in varied phraseology 'I am that,' and Śvetaketu, in the Chhándogya Upanishad, is told "thou art that," the idea conveyed is that the *ego* is no other than the Divinity himself. But the brief enigmatic way in which the theory was disclosed led to much misapprehension. And it was left to the renowned Śankara Áchárya, the apostle of this school, to elaborate this Nondual or Adual theory at considerable length in his great commentary on the Vedánta Aphorisms of Vyása. He would tolerate nothing that did not coincide in every detail with this cardinal theory, and he argued it out in very much the same form in which Berkeley worked out his celebrated theory regarding the essential non-reality of matter.

Śankara, however, left it in a position which could not be final, and his followers could not rest satisfied at the point where he left it. The question soon arose as to, how does this Supreme Soul, one without a second, provide souls for the countless individual units of creation? To admit the theory of universal pervasion—of an infinite mass made finite by enclosing bodies, like the atmosphere enclosed in jars, which the followers of Śankara developed at great length—was to admit a system of Pantheism, or animism, the *anima mundi* of Stahl, which was open to serious logical defects, and likewise inconsistent with the doctrine of faith which the Bhagavadgítá had promulgated, and which got extensive currency a while before the time of Śankara. Indeed Śankara himself had felt this, and provided for it by a faint outline of a theory of shadow or reflection,—a shadow from the Great Soul forming individual souls. This is the doctrine of the Bhágavata Puráṇa. Vishṇu Svámí, the founder of the Rudra-sampradáya, changed the shadow into a scintilla or

spark—something more substantial than a mere shadow—and worked it out into a regular system. This is called *S'uddhádvaitaváda*. It was further developed by Vallabha A'chárya, whose dogma has since degenerated into hideous licentiousness. The idea is, that since every individual soul is the Supreme Divinity, that soul should not be tortured by penance and privation, but fed and nourished and kept in an everlasting round of pleasures, and the result is a system of Epicureanism. Rámánuja was not satisfied with this shadow or spark. He assumes that the Supreme Soul (Vishṇu as he names it) devides itself into a twofold form—a Supreme Spirit or *Paramátmá*, the cause, and a gross one, or effect, the individual soul units together with the universe or matter. This idea led him to the three categories, soul (*chit*), non-soul or matter (*achit*), and the Lord (*íśvara*). This tenet is called *Viśishṭádvaita* or 'qualified unicity.' Professor Wilson puts it thus :—

"Creation originated in the wish of Vishṇu, who was alone, without a second, to multiply himself : he said, I will become many ; and he was individually embodied as visible and etherial light. After that, as a ball of clay may be moulded into various forms, so the grosser substance of the deity became manifest in the elements, and their combinations : the forms into which the divine matter is thus divided, are pervaded by a portion of the same vitality which belongs to the great cause of all, but which is distinct from his spiritual or etherial essence :" (Works, I, pp. 43*f.*).

Nimbárka or Nimbáditya* who founded the sect of the Sanakádi-sampradáya, went further, and promulgated the theory of distinct individual souls, or subordinate particles, ordinarily inferior but susceptible of fusing or subsiding in the Great Soul, so as ultimately to end in one. This is called *Dvaitádvaitaváda* or 'the theory of Dualistic Aduality.'

Professor Wilson thus summarises the tenets of this school : "Life, they say, is one and eternal, but dependent upon the Supreme and indissolubly connected with but not the same with him." (Works, I., p. 144). The Mahopanishad feels the difficulty of this position, and evades it by saying "as the birds and the string, as juices and trees, as rivers and oceans, as freshwater and salt, as the thief and his booty, as man and objects of sense, so are God and Life distinct, and both are ever undefinable."

These several ideas of shadow, reflection, scintillation, subordinate particles &c., occur in very ancient works, not excepting the Vedas, but

* This is a nickname which was given to the saint because he once stopped the motion of the sun on the top of a Nimba tree (*Melia azadiracta*). His original name is not known. Dr. Wilson says it was Bháskaráchárya, but I suspect this is not correct, for there is extant a commentary by Bháskára Áchárya on the Vedánta Sútra, which is distinct from the commentary by Nimbárka on that work.

they are there very loosely and promiscuously put forth, without any serious attempt at philosophic precision. The authors named above were the first to give to each a scientific fixity and distinctness. It should, nevertheless, be mentioned that there is yet considerable misunderstanding current on the subject, and the three terms *Suddhádvaita*, *Vishṭádvaita*, and *Dvaitádvaita*, are very carelessly used—the first according to some, is the same with *Advaita*, and the third is identified with the second. For the purposes of this paper it is, however, not necessary to attempt here any detailed exposition.

The last is the theory of Duality or *Dvaitaváda*, of one Supreme Soul and innumerable individual souls, essentially independent of each other. Its teacher was Mádhva Áchárya* *alias* Ánanda Tírtha *alias* Púrṇaprajña or Purṇamandira, who wrote a short commentary on the Vedánta Sútra, and therein developed his theory, obviously taking it from the Nyáya-darśana, where it occurs in an unmistakable form. His doctrine is known under the name of *Púrṇaprajña-darśana*, and his followers call themselves Brahma-sampradáyí. As already stated, it dates from long before the time of the Adual doctrine. It is frequently referred to in the Vedas, and in the Upanishads it is indicated at times. But the idea is not fully worked out, and in some places, the theory of both the Supreme and the individual souls abiding in the same body crops out prominently. This is particularly the case in a remarkable allegory in the Muṇḍaka Upanishad, which occurs also in the Svetáśvatara Upanishad, where it is said :

"Two (birds) of handsome plumage, rivals and friends, nestle in the same tree : one of them eats the sweet fruits ; the other looks on without eating."†

The obvious meaning of this verse implies a duality ; and those who adopt the Dual theory appeal to this authority ; but Sankara looks upon it as an indication of the Supreme Soul associated with plastic nature or Prakṛiti, or "consciousness associated with ignorance, desire and the residua of former works."‡

Closely correlated with the above theories are the doctrines of *Saguṇa* (qualified) and *Nirguṇa* (unqualified) in regard to the Supreme Soul. The nearest equivalent English philosophical terms for these would be 'con-

* Grammatically the word should be *Mádhva* as a derivative of *Madhu*, but in MSS. it is frequently, not always, found with the first vowel short, and both Professor Wilson and Mr. Gough (in the Sarvadarśana-sangraha) have accepted that form.

† द्वा सुपर्णा सयुजा सखाया समानं वृक्षं परिषस्वजाते ।
तयोरन्यः पिप्पलं स्वाद्वत्त्यनश्नन्नन्यो अभिचाकशीति ॥

‡ अविद्याकामवासनात्मकलिङ्गोपाधिविशिष्टात्मा ।

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ditioned' and 'unconditioned,' but they are not exactly to the point. Unconditioned in English has two meanings. Some employ it to denote entire absence of all *restrictions*, while others, and a large number, take it to imply entire absence of all *relation*. Indian philosophers are unanimously of opinion that the Supreme Soul is absolutely unconditioned in the sense of total absence of all restrictions. It is perfectly free from all trammels of laws, rules and and conditions, and nothing can restrict it in any sense whatever. But they are divided as regards relation. The followers of the Yoga school hold that there is no relation whatever between the Supreme Soul and the universe. The universe is uncreate and eternal, and its course is regulated by laws or nature which is not subject to Divine will, and human souls, being uncreate and eternal, are equally independent of a creator. But those monitists who believe in a primal creation and trace that creation to a divine architect, have to establish a relation between the Divine and the individual souls, and opinions in this respect vary greatly. Their diverse theories about emancipation also necessitate some relation. The doctrine of incarnation also requires that the Divinity should be, at least at times, subject to conditions. And the process of transition from the unconditioned to the conditioned has been explained in different ways. The word *saguṇa*, moreover, implies personality, and some of those who believe in incarnations insist upon the Godhead being a personal divinity, while others hold him to be always and invariably impersonal (*nirguṇa*).

To turn now to the Vaishṇavas. They belong to one or other of the three subdivisions of the Adual school or to the Dual one, under the generic names of S'rí-sampradáya, Rudra-sampradáya, Brahma-sampradáya, and Sanakádi-sampradáya, and the reconciliation of their different theories to subserve the cause of Bhakti is the object of the work under notice.

The work opens with a quotation from the Bhágavata Puráṇa in which Krishṇa says "know ye that I am the preceptor of all preceptors" (*Sarveshám apy ácháryáṇám ácháryaṃ máṃ vijániyát*), and then argues, since preceptors (*ácháryas*) are incarnations of the Lord, and their instructions must be evidence of truth, it follows that when Vallabha Áchárya and others, after refuting the Dual dogma, establish the Nondual one, their doctrine must be accepted as true; but in so accepting it, one must reject the theory of Mádhva as unreliable and untrue. Should he, however, accept the theory of Mádhva, the sayings of Vallabha Áchárya and others, which refute the Dual tenet, must of course fall to the ground. 'And on the logical principle of that which is contradictory is incorrect,' all the various doctrines of the Vaishṇavas must be condemned as untrue. The question then is, how to solve this riddle? And

the author begins by enquiring what was the doctrine of Chaitanya, the founder of the Vaishṇava sect of Bengal? As I have already remarked at the beginning, this was a moot point. Chaitanya has not left us any record of his philosophical ideas. He was an enthusiastic Bhakta, who devoted his entire time to the cultivation of faith, in abstracting himself from all carnal wants and worldly attractions, in dedicating himself, body and soul, to his maker, and in disseminating the doctrine of faith among his followers. It is doubtful if he ever wrote any work or treatise on religion. Certain it is that none has come down to our time. Kavikarṇapura, a contemporary of Chaitanya and author of great eminence among the Vaishṇavas, flatly denies that Chaitanya ever wrote anything about his doctrine. In the 'Chaitanya-chandrodaya' of that author the question is asked, "Dear Sir, has this Hari published any work explanatory of his principles?" and the reply given is: "Though it is well-known that the Almighty is the author of the Vedas, yet whatever the Knower of the heart teaches, he teaches through agents indirectly, and his lessons are not defined by time or space."*

His biographers devoted themselves with Boswellian assidnity to the task of recording his sayings and doings, and certainly succeeded in preserving a vivid picture of his life. But their object was to appeal to the masses, to create a lively interest in their teacher, and anecdotes of benevolence, mercy, devotion, self-abnegation, and total disregard of worldly attractions, were calculated to serve their purpose best, and they selected them. Philosophical dogmas and abstruse reasoning about the Unconditioned were the least adapted to subserve such a purpose, and they therefore eschewed them altogether, or kept them in the back ground. And under the circumstances it is but natural that there should be considerable difference of opinion in regard to the saint's system of philosophy. The thesis has to be worked out by a comparison of the bearings of his casual remarks and mode of life, and not proved by the quotation of any positive declaration. Our author starts by saying that Chaitanya inculcated the same doctrine of Dualistic Aduality which Nimbáditya had taught long before him; and in support of his position combats such objections as, in his opinion, might be started against it.

To the faithful followers of Chaitanya the first objection would naturally be, how can Chaitanya, who was the Supreme Divinity, even Vishṇu himself, born in flesh, accept the doctrine of a mere mortal, and become his follower? He should teach that which is original, that which none before

* पारिपार्श्वदः। भाव किं तेनेह तेने चरिणा स्वाभिमतमतव्यञ्जको ग्रन्थः। सूत्रधारः। यद्यपि को न वेद वेदकर्त्तृत्वं भगवतस्तथापि खल्वन्तर्यामी यामीदृते प्रेरणां न खलु सा वाङ्मोपदेशतो देशतो वा कालतश्च परिच्छिन्ना भवितुमर्हति।

knew, and not that which was already known. The objection is met by the remark that Nimbáditya was an incarnation of Vishṇu, and his opinion was therefore that of Vishṇu, and Chaitanya being, likewise, an incarnation of Vishṇu, the doctrine expounded is of the same individual given under different conditions, and there is therefore no following in the case. In order to prove that Nimbáditya was an incarnation of Vishṇu, a verse is cited on the authority of Hemádri, who makes the statement. Learned Vaishṇavas, moreover, urge that the primary object of Chaitanya was not to inculcate a new tenet in psychology, but to give wide currency to the doctrine of Bhakti, and it was not necessary for him, therefore, to dwell upon universally accepted truths.

Having answered this preliminary objection, the author cites in support of his opinion that Chaitanya was a Dvaitádvaitavádí, several authorities. The first is Viśvanátha Chakravartí who, in his commentary on the Bhágavata, it is said, has made the statement. The words used are, *Chakravartibhiḥ svagranthe nimbáditya-matavarttitvena maháprabhúṇáṃ likhanát*, but no quotation is supplied.

The next authority is Gangáráma Gauḍa, who is said to have been a disciple of Chaitanya. In his case, however, there is a specific assertion. In his work called *Nibandha* he begins with the remark that "Nimbáditya was the destroyer of darkness" (*Nimbádityas tamodhvaṃsí*) and ends by saying "composed by a follower of the doctrine of Nimbáditya," (*Nimbáditya-matavarti-virachitáyám*), and the inference from these passages is that since an immediate disciple of Chaitanya professed himself to be a follower of Nimbáditya's doctrine, his teacher must have followed the same doctrine.

The third authority is Harideva Tarkavágíśa, of Saidábád, near Murshidábád, but no passage has been cited, nor is the name of his work given. I have not heard of this personage, and no one can give me any information about him.

The last authority is Náráyaṇadása, a disciple of a disciple (*anuśishya*) of Advaita Áchárya, and a Vaishṇava author of some repute. In his treatise on branding the body with the symbols of Vishṇu, (*Taptamudrádháraṇa*) he makes a positive statement to the effect that Chaitanya accepted the Dualastic Aduality doctrine of Nimbáditya.

It is scarcely necessary to observe that this collection of authorities is poor at best, and such as it is, it may be easily set aside, both by circumstantial evidence and by positive statements of the contemporaries of Chaitanya. Bhaktas believe 'that in order to the attainment of supreme beatitude, they must pass through five stages or states of probation. The first of these is called *Sánta* or quietism, or a state of calm contemplation of the Deity. The second is *Dásya* or servitude, which in a more

active state leads on to the third, or *Sákhya, i. e.*, an ardent feeling of friendship for the divinity, and that in its turn to the fourth or *Vátsalya* (filial affection), and lastly to *Mádhurya* or love, when the devotee, rising above all idea of divinity, entertains the same ardent attachment for the Deity which a human lover feels for the object of his love, or "what the milkmaids of Vṛindávana entertained for their charming Kṛishṇa." These ideas cannot be consistent with the theory of Aduality. Service and friendship cannot exist where the adorer and the adored are identically the same. One must start with the idea of inferiority before he can deem worship and service desirable or appropriate, and this would necessarily imply Duality and not Unity. Nor is the reward of the service, &c., as inculcated by the Vaishṇavas, such as to support the Adual theory. That reward, according to the Bhágavata Puráṇa is fivefold ;* it may amount to (1) dwelling in the same region with the Divinity, *(sálokya)*, or (2) to the attainment of the same supremacy or dominion as that of the Divinity (*sárshṭi*), or (3) to fellow-lodgership, or living in close proximity to Him *(sámípya)*, or (4) to the attainment of the form of the Divinity *(sárúpya)*, or (5) to unity or union with Him, *(ekatva)*.† The last is the same with the Nirváṇa or *Laya* of non-Vaishṇava authors, but Vaishṇava commentators are not satisfied with it, and explain it away in various ways. The word *sáyujya* is a homonym of *ekatva*, and that has been explained by Táránátha in his *Váchaspatya* to mean dwelling together *(ekatra-samavasthána)* ; others hold it to mean communion or practically entering a house, but not being identified with it.‡ Any how the Vaishṇavas do not care for the last, and rely on the first four, and therein, we have rivalry, independent existence &c., but no union or merging of the human into the Divine Soul, and consequently a dual theory. Kavikarṇapura, who was a contemporary of Chaitanya, and took pride in having seen the saint during his ministry, and for having followed him as a disciple, is clearly of opinion that Chaitanya

* सालोक्य-सार्ष्टि-सामीप्य-सारूप्यैकत्वमप्युत । Book III, Chapter 29, Verse 13.

† Śridhara Svámí explains these five terms thus : सालोक्यं मया सह एकस्मिन् लोके वासः । सार्ष्टिं समानैश्वर्यं । सामीप्यं निकटवर्त्तित्वं । सारूप्यं समानरूपता । एकत्वं सायुज्यं ।

‡ कस्मिन्नपि पुस्तके श्लोकमध्ये सायुज्यपाठः व्याख्याङ्गीकरणसम्मतः । किन्त्वेकत्वमित्यस्य व्याख्यानं सायुज्यं । यदि च सायुज्यपाठः केनापि स्वीक्रियते तदा सायुज्यैकत्वयोः को भेदः स्यात् । अत्र समाधानं । सायुज्यशब्दस्य प्रवेशार्थत्वेपि परमेश्वरात्मकत्वं न स्वीकार्य्यं, यथा-पुरं प्रविशतीत्यत्र पुरसंयोग एव प्रतीयते न तु पुरात्मकत्वमिति । एतद्रूपा व्याख्या कस्मिंश्चित् स्थाने प्राचीनैः कृतास्ति ॥

was a Dvaitavádi, and in the work above named thus expresses his convictions :

"ACTOR.—Your Bhaktiyoga or exercise of devotion, which, you say, was unknown to the authors of our Sástras, produces a wonderful knowledge the result of which is absorption into the Deity, the same which the professors of the Sástras inculcate; where lies then the difference?

"MANAGER.—From the text which says :—'The recitation of the name of the loved one produces an enamoration and an earnestness which makes him, who adopts the religion, to laugh, and cry, and scream, and sing, and dance like a mad man,' it is evident that the Bhaktiyoga, of which singing the name of the Lord is a component, produces a peculiar attachment which passes on to an excessive fellow-feeling. It is also said, 'such truthful beings perceive me to be of pleasing and of benignly smiling—of gratifying and excessively beautiful—forms, with rosy eyes, and talk to me in sweet soothing words. Devotion by the aid of those charming forms and innocently playful and smiling glances and pleasing speech, robs them of their mind and soul, and leads them on unto salvation, against their will.' From which you see that salvation is a state of fellow-ship with the Deity and not absorption; therefore the venerable Kapila said: 'devotion is superior to santification;' and hence is the singing of the name of the Lord, in the Kaliyoga, no secondary means towards the attainment of the great object of human existence, and the source of heavenly love.

"ACTOR.—Sir, your words are most wonderful. The Sástras ordain that the name of the Lord leads to absorption, and you maintain the contrary. We have heard, 'by reciting the name of Náráyaṇa the dying Ajámila obtained *mukti*.'

MANAGER *(smiling)*.—The word mukti here means fellowship, for in that very place it is said: 'He immediately assumed the shape of the companions of the Deity.' The doctrine of Kṛishṇa Chaitanya overthrows all others. All righteous men adopt this doctrine. Even Kali himself is blessed by this incarnation.*

It should be added, however, that Kavikarṇapura has approvingly quoted many passages from the Pancharátras and other works which are strongly adualistic in their purport, and makes Chaitanya say that he entirely subscribed to them. The only way to reconcile this contradiction is to accept the theory of Dualistic Aduality, which after all is but a compromise, and as such affords room for the simultaneous inculcation of the two dogmas. The fact is, Chaitanya never busied himself with pure psychology, and the attribution to him of any specific doctrine is more a matter of convenience than a postive historical fact.

* R. Mitra's Chaitanya-chandrodaya, Introduction, pp. xi-xii.

To resume our analysis of the work under notice. The objection which next suggests itself to our author is—since Mádhva, Rámáṇuja and Vishṇu Svámí have been recognized as teachers and great Vaishṇavas, how can their opinion be rejected? But this is evaded by the remark that their tenets have not been completely developed in their works.

Next comes S'ridhara Svámí, a renowned exegesist on the Bhágavata, in regard to whom Chaitanya himself had said—"What is opposed to the tenets of Svámí should be spurned by us" [*Svámimata-viruddhaṃ yat tad asmákam anádaraṇíyam.*] He upholds the doctrine of Suddhádvaita, and how is that to be reconciled with the assumption of Chaitanya having followed Nimbáditya? This is met by a reference to the Sandarbhas,* where it is argued that in his commentary on the Bhágavata, S'ridhara Svámí has devoted very little space to the explanation of the doctrine of knowledge combined with faith (*jñánamiśra-bhakti*), whereas he has dwelt largely on pure faith, (*śuddha-bhakti*), and it is obvious therefore that he preferred the latter. According to the Advaita system, God is always and invariably unconditioned, and never becomes conditioned, but in the Bhágavata Puráṇa his incarnation is repeatedly admitted, and S'ridhara Svámí having admitted that, it must also follow that he did not entertain the pure Adual doctrine, and *ex necessitate rei* must have accepted the theory of Dualistic Aduality.

The last position opens the way to the question, why not then at once admit the Dualistic theory which is more favourable to the incarnation dogma than the other? If we believe human souls to be emanations of the Divine one, every birth would be an incarnation of the Divinity, and there would be no difference between ordinary births and incarnations, except, perhaps, in the quantity of the divine essence contained in each, and we have to divide the unconditioned into quantities of greater and less proportions, whereas the Dual theory marks a radical difference of essence, and thereby obviates every difficulty. It is appropriate, too, that the inferior should evince faith and devotion to the superior, but where there is no difference in essence, it is inconsistent to talk of faith and devotion. And inasmuch as Chaitanya laid the greatest stress on incarnations

* Six different works on the religion of Chaitanya bearing the common appellation of Shaṭ-sandarbha. Their specific names are—(I) *Bhakti-sandarbha*, (II) *Tattva-sandarbha*, (III), *Bhagavat-sandarbha*, (IV), *Paramártha-sandarbha*, (V) *Kṛishṇa-sandarbha*, (VI) *Príti-sandarbha*. There is a 7th under the name of *Daśamakrama-sandarbha*, which is looked upon as an appendix to the hexapartite work. These were written by Jíva Gośvámí under the superintendence and instruction of Rúpa and Sanátana, the two foremost disciples of Chaitanya. The object of the works is to prove that the doctrine inculcated in the Bhágavata is the same which Chaitanya taught.

and on the doctrine of Bhakti some person assume that he followed the doctrine of Mádhva Áchárya. This is, however, not admitted, inasmuch as Chaitanya has himself said (as recorded by Kṛishṇadása Kavirája, in the second book of the Charitámṛita) that the distinctions of the adorer and the adored is inconsistent with pure faith.*

He goes further and says, "the two theories of the identity of the Divine and the individual soul, (*abheda*) and of the radical difference thereof (*bheda*) have been inculcated by Vishṇu Svámí and others; among them those who hold the identity doctrine should be known as following the opinion of Vishṇu Svámí, and those who adopt the radically different one follow the opinion of Mádhva, and therefore they are called *támasah* or appertaining the quality of darkness."†

This would have sufficed for an argument; but as the object of the writer is to reconcile all adverse opinions, and not to create dissensions, he goes on to say that, though apparently contradictory, the opinion of Mádhva is not hostile, and he works out this idea by saying that Śankara and others were great devotees or worshippers of Bhagaván (Vishṇu), and as such they could not be otherwise than following the doctrine of Nimbáditya who gave the greatest emphasis to faith, and Mádhva Áchárya, being an immediate disciple of Śankara Áchárya, he and his later followers cannot have forsaken the doctrine of their philosophic tutor, and we are informed in the Sandarbhas, that by following the teachership of Mádhva, Chaitanya could not but continue to belong to the school of Nimbáditya.‡ He then anticipates the objection—what proof have we that the teachership of Śankara and Mádhva was admitted, and urges in reply that the Sandarbhas say so. Passages are also cited from the *Padma Puráṇa*, the *Agni Puráṇa* and Śankara's commentary on the *Vishṇu-sahasra-ṇáma* to prove this theory. It is argued, further, that even as Śridhara Svámí, so has Śankara, in his work dwelt on both the doctrines of Duality and Aduality, and his instructions differ only with reference to the mental character of his pupils, as householders or hermits, and the

* यत्तु भक्तेः साधनं साध्यं च प्रतिपादितं तत् गृहभक्तेः । विरुद्धमचेति श्रीकृष्णचैतन्यचरितामृते मध्यमखण्डे श्रीमद्भिः कथितमिति ।

† विष्णुस्वामिभिर्भेदाभेदौ प्रतिपादितौ तत्राथे स्वभेदांशे विष्णुस्वामिमतानुसरणं भेदेऽपि तैर्माध्वमतवत् प्रतिपादितं तदर्थं ते तामसा इत्युक्तं ।

‡ किञ्च माध्वमतवर्त्तित्वस्याभ्युपगमेऽपि न विरोधः । तथा हि श्रीशङ्कराचार्याणां भागवतत्वेन निम्बादित्यमतवर्त्तित्वात् । माध्वाचार्याणाञ्च साक्षात् तच्छिष्यताप्राप्तेरिति तत्त्ववादिगुरूणामाधुनिकानां श्रीशङ्कराचार्यशिष्यतां लब्धापोह्यनेन च सन्दर्भेण । तच्छिष्यप्रतिपादनेन तच्छिष्यभूतमाध्वमतवर्त्तिशिष्याणां महाप्रभूणां माध्वमतवर्त्तित्वेऽपि निम्बादित्यमतवर्त्तित्वम् ।

difference therefore is not essential. In support of this, a verse is paraphrased from the Gítá which says, "Each beholds God in the same way in which he reflects on Him," (*yádṛiśí bhávaná yasya tádṛig eva tasya svarúpaṃ darśanam*).

In the course of his work the author enters frequently into the question as to how the Unconditioned Divine Soul, formless, qualityless, and all-pervading, makes itself conditioned in incarnations? As a devout Vaishṇava, believing with all his faith Chaitanya to be the sum total of Divinity in a human form, he cannot deny that God descends on earth in human flesh, and yet he cannot raise his voice against the great teacher of his faith who has upheld the nondual doctrine, and he gets out of the difficulty by saying, "Verily Brahma is of the form of truth, intelligence and joy, but to extend his grace to his devotees he appears in substantial forms",* and fortifies his position by a number of quotations. The dogma is of course as old as that of incarnation, and needs no amplification here. Nor need I say anything on the logical consistency of the arguments by which the various reconciliations are effected. The work is intended for men of devout faith, and logic in their case is often quite different from what it is to ordinary common sense.

* सच्चिदानन्दरूपं ब्रह्मैव भक्तानुग्रहायाविर्भूतविग्रहस्वरूपं ।

Fig. 1. Mandala.

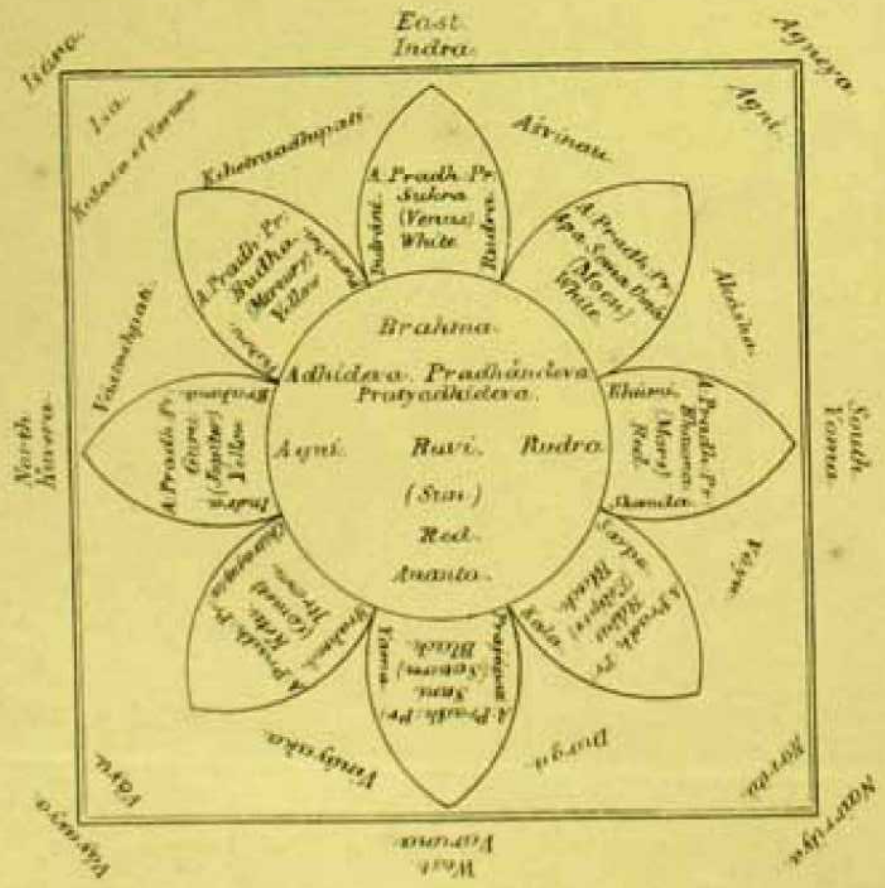
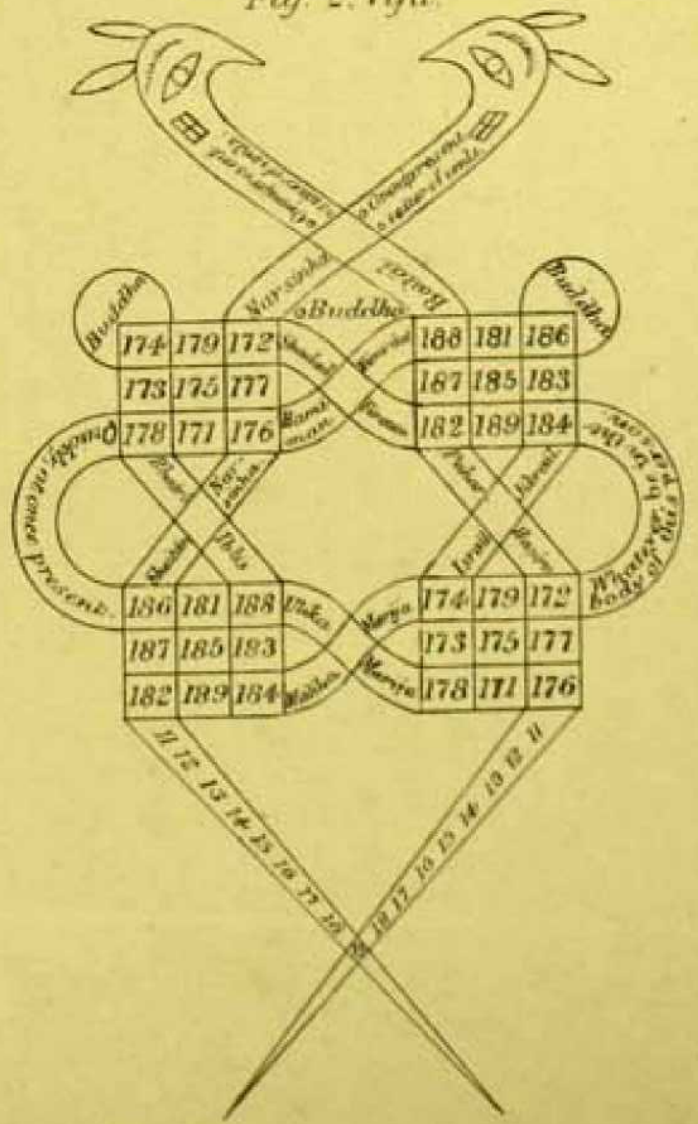


Fig. 2. Vija.



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HINDU LITURGICAL DIAGRAMS.

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JOURNAL

OF THE

ASIATIC SOCIETY OF BENGAL.

Part II.—NATURAL SCIENCE.

No. I.—1884.

I.—*The Theory of the Winter Rains of Northern India.*—*By* HENRY F. BLANFORD, F. R. S., *President, Asiatic Society of Bengal, Meteorological Reporter to the Government of India.*

[Received and Read March 5th, 1884.]

(With Plate I.)

It has long been a commonplace of meteorological hand-books, that the winter, or, as it is more frequently (but less accurately) termed, the north-east monsoon, is due to a reversal of those conditions which, in the summer season, set in movement a flow of air from equatorial regions towards the plains of Southern and Eastern Asia. But, beyond this general statement of fact, very little has been done towards working out the physical characteristics of this familiar phenomenon of the Indian winter; and such vague conceptions as are implied in the popular theory, leave entirely unexplained the well-known occurrence of rain, about Christmas time, in Upper India; a region, which, according to that theory, should then be the seat of a barometric maximum, the fount and source of the winter monsoon.

Since the establishment of a Meteorological Department under the Government of India, has rendered it possible to study the weather of India as a whole, from day to day, some insight has been gained into

the phenomena which precede and accompany the cold-weather rainfall of Northern India. In each of the annual reports on the Meteorology of India, in recent years, two or three instances of this cold weather rainfall have been described and illustrated at some length; and at the present time, although many important points still require further elucidation, it is at least possible to set forth some generalizations on the conditions which usher in the precipitation of the cold-weather rains, and on the probable source of the vapour which feeds them.

The four charts on Plate I exhibit the average distribution of atmospheric pressure in the months of November, December, January, and February. These charts, being based on the registers of duly verified barometers during the last seven years, corrected to a common standard and reduced to sea-level values from elevations, determined in all but a few exceptional instances, by actual spirit-levelling to the mean sea-surface, may be accepted as representing, with a near approximation to truth, the relative differences of pressure which characterize the winter months in India.* Certain characters common to all, may be regarded as distinctive of the season. The seat of highest pressure is in the neighbourhood of Peshawar. Whether this may be taken as indicating that the pressure on the highlands of Cabul is also greater than at similar elevations over the plains of India is, however, very doubtful. The situation of Peshawar on a plain of moderate extent, girt around with mountains, is such that the high pressure may be and very probably is a local effect of the cooled air, draining on all sides from the surrounding slopes and filling the basin from which its escape is much obstructed. A similar high pressure is shewn by some other stations near the foot of the N. W. Himalaya, of which Dehra is a notable example. The conditions of pressure at higher elevations over the Himalaya, will be noticed presently.

The next feature to be noticed is that, throughout the winter months, the axis of average high pressure on the plains and plateaux of India, occupies nearly the same situation as that of low pressure at

* Rigorously speaking any such representation must of course involve an element of unreality, which is the greater, the greater the difference of land levels in the area embraced in the chart; and, where, as in the case of India, large portions of the area differ by 2,000 feet and upwards, this element attains to some importance. Although it may not seriously impair the value of the chart as an illustration of the pressure-differences or potentials which maintain the system of wind-currents, the fact that the lower strata of air, resting on low alluvial plains, have no horizontal extension to the higher plateaux and cannot therefore be directly and immediately influenced by the atmospheric pressure there existing, is one that must be kept in view in discussing the relation of the winds to the pressure-distribution.

the opposite season. It extends from Upper Sind across Rajputana and the Central India plateau to Chutia Nagpur; the pressure along this axis declining, more or less irregularly, from N. W. to S. E. To the north of this ridge, a trough of relatively low pressure on the Gangetic plain separates it from the higher pressure along the foot of the Himalaya, and, in most years, the pressure in the Punjab is somewhat lower than that of Western Rajputana. On the other hand, to the south of this axis, the pressure falls gradually down to Cape Comorin and Travancore; being, however, considerably higher on the east than on the west coast of the peninsula. In fact, the isobars run down the peninsula almost parallel with the west coast. The low pressure area which runs down the west coast of the peninsula is prolonged to the north, up the Gulf of Cambay, producing a northward bend in the isobars of that region very similar to that shewn by them in the summer monsoon, but with reversed gradients.

Hence the cold weather distribution of pressure may be not inaptly described as a reversal of that which characterizes the summer monsoon; but, in the first place, the barometric differences between the extremes, and therefore the gradients effective in producing the monsoon current, are less than half as great, and, in the second place, the axis of high pressure across Northern India lies further south than its opposite in the summer monsoon. It lies well across the middle of the plateau to the south of the Ganges, instead of following the course of the river, or, as not unfrequently happens in the case of the summer trough of depression, somewhat to the north of it. Thus, both in summer and winter, low pressure tends to prevail in some part or other of the Gangetic valley and the Punjab; but in the summer the gradient declines towards the N. W., in the winter, to the S. E.

There is reason to believe that this normal distribution of pressure is restricted to the lower strata of the atmosphere, that is to say, to the stratum less than 7,000 feet in vertical thickness, measured from the sea-level. Thus, for instance, a row of stations on the plains of the Punjab and Ganges, ranging from Peshawar down to Purneah, shews a small, but decided, fall of pressure from N. W. to S. E., when all the mean readings are reduced to their equivalent values at the sea-level. But if the mean pressures of the hill-stations, Murree, Chakrata, and Darjeeling (all of which are between 6,000 and 7,000 feet, or a little over the latter elevation), be reduced to a common level of 7,000 feet, the gradient at that elevation is found to be slightly, but distinctly, reversed; Darjeeling, the easternmost station, shewing the highest pressure.

Sea-level Equivalents of Atmospheric Pressure on the Punjab and Gangetic Plains.

	November. ins.	December. ins.	January. ins.	February. ins.
Peshawar	30·098	30·174	30·161	30·115
Lahore	·023	·097	·084	·029
Delhi	·017	·089	·076	·020
Lucknow	·008	·078	·062	·006
Patna.....	29·995	·066	·060	·001
Purneah	·966	·028	·036	29·977

Equivalents at 7,000 *feet of Atmospheric Pressure at Stations on the outer Himalaya.*

	November. ins.	December. ins.	January. ins.	February. ins.
Darjeeling.....	23·404	23·380	23·339	23·320
Chakrata	·360	·340	·305	·281
Murree	·356	·332	·302	·268

It was shewn also in a paper on the winds of Northern India,* and in the *Indian Meteorologists' Vade Mecum*,† that, as between the Himalaya and Ceylon, the plane of neutral pressure, in January and February, is at a lower level than 7,000 feet; but not in the months of November and December; at least as an average condition. To this point, which is important, I shall presently return.

These facts of the pressure-distribution prepare us then to expect that which our wind-registers shew, *viz.*, that the winter monsoon is a much shallower, weaker, and more unsteady current than its correlative of the summer season. On the plains, the air is very calm in the Punjab; and, to the south and south-east, flows as a very gentle current, chiefly a day wind, drifting from the N. W. down the Gangetic plain; from north or N. E., and somewhat stronger, across the Central Indian plateau and the Satpuras; and from north or N. N. W. in Lower Bengal; then turning to N. E. or E. in the northern part of the peninsula, while, down the Bay of Bengal, it is pretty steady as the well-known N. E. monsoon. It turns, therefore, in an anticyclonic curve around the seat of maximum pressure in North Western India. Its rate of movement, its comparative steadiness, and its mean direction may be estimated from the following tables:—

* Phil. Trans. vol. 164, p. 563.

† Page 175.

Percentage of Wind-directions and Mean Daily Movement of the Wind at Stations in Northern India during the Winter Monsoon.
(November to February.)

		Years.	Per cent.									Mean daily movement in miles.
			N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Calm.	
A North-Western India.	Rawalpindi	12	4	7	9	5	2	9	25	13	26	43
	Lahore	12	7	7	12	3	1	3	20	16	31	48
	Ludhiana	10	5	3	2	9	1	2	6	42	30	33
	Delhi	7	7	5	3	11	3	8	27	30	6	73
	Mooltan	12	8	21	1	10	4	14	2	15	25	47
	Jacobabad	4	17	14	9	5	1	3	6	13	32	48
	Bickaneer	4	10	18	8	7	9	20	5	7	16	68
B Gangetic Plain.	Roorkee	17	2	3	2	13	3	6	6	25	40	50
	Bareilly	12	3	5	4	8	1	7	17	39	16	68
	Lucknow	12	12	5	2	4	2	5	17	28	25	43
	Allahabad	12	9	6	9	2	3	6	24	11	30	38
	Gorakhpur	12	1	2	4	6	2	7	29	15	34	?
	Benares	16	4	6	8	3	3	11	39	12	14	64
	Patna	13	4	5	7	3	3	8	35	16	19	44
	Purneah	7	4	9	9	3	2	8	52	13	...	46
C Western India.	Hyderabad	4	41	7	...	1	2	10	5	19	15	158
	Kurrachee	21	9	18	16	4	4	14	18	9	8	229
	Rajkot	4	23	25	20	2	1	3	6	11	9	126
	Deesa	22	19	23	11	7	3	6	9	14	8	202
	Pachbudra	3	4	24	15	5	4	9	4	6	29	?
	Surat	4	12	17	18	10	2	12	14	11	4	132
D Central India Plateau and Satpuras.	Mount Abu	5	9	19	14	8	10	18	9	7	6	105
	Neemuch	4	8	12	12	15	16	16	9	12	?	153
	Indore	4	10	15	28	8	8	4	12	5	10	59
	Jhansi	10	2	35	6	8	2	15	4	11	17	51
	Nowgong	4	18	9	9	3	1	5	11	16	28	38
	Saugor	11	16	29	10	6	5	7	11	14	2	54
	Sutna	5	17	13	8	3	4	5	11	32	7	89
	Jubbulpore	11	24	18	7	6	16	6	8	9	6	55
	Pachmarhi	11	15	17	8	15	7	9	5	21	3	68
	Seoni	11	2	40	5	16	1	18	...	16	2	68
	Chikalda	5	25	4	4	11	18	12	7	17	2	110
E Chutia Nagpur.	Hazaribagh	14	10	6	4	4	4	6	23	40	3	118
F Lower Bengal.	Berhampore	14	24	8	3	2	2	8	16	25	12	41
	Calcutta	19	31	7	6	3	9	8	15	20	1	80
	Jessore	14	30	10	3	4	4	5	8	25	11	42
	Dacca	14	17	9	3	4	7	9	15	20	16	53

On comparing these tables with those for the summer monsoon, at the same stations, the relative greater frequency of calms, more especially in the Punjab and the Gangetic plains, the inferior steadiness of the wind in the prevailing quarter, and the very low absolute rate of its movement are strikingly apparent. The highest rates of movement are in Western India, as are also those of the summer winds, but the former vary from less than half to less than two-thirds of the latter, and the directions are much more variable.

It is further to be noticed that, while, at most stations, there is one direction of decided maximum, with some oscillation on either side (this being the local direction of the winter monsoon), at stations in the Punjab and the adjacent parts of the Gangetic plain, and also at Jhansi, Jubbulpore, Chikalda, Mount Abu, and Kurrachee, there is a distinct secondary maximum from an opposite quarter; and, at Mount Abu, Neemuch, and Bickaneer, a certain absolute preponderance of southerly winds. These are the winds which interrupt the winter monsoon and bring up the vapour that is condensed on the Himalaya as snow, and on the plains of Northern India as the winter rains of that region.

In fact, not only is the barometric gradient which characterizes the winter monsoon less highly inclined than that of the opposite season, and the vertical height to which it prevails (the elevation of the neutral plane) considerably less, but it is more frequently reversed, and especially so in January and February; and, as a temporary phenomenon, barometric minima, with the usual vortical systems of winds, occasionally appear in Northern India. On such occasions, rain almost invariably follows, beginning generally over the mountains that hem in the Punjab, and on the plains at their foot, and thence extending to the east and south-east; while the barometric depression moves eastward, and cold westerly winds, bringing fine weather and a wave of high barometric pressure, follow up in the rear.

In the majority of cases the history of which has hitherto been traced out, the barometric minimum first appeared, and was apparently formed in some part of the great north-western plain, most frequently in the Punjab or Upper Sind; but, in some cases, in Western Rajputana. Mr. F. Chambers has put forward the suggestion* that these minima travel hither from regions further west, from the plateau of Beloochistan or the still loftier mountain-tract of Afghanistan; but this seems to be a misapprehension. We have, indeed, no observatory in Afghanistan, and it may be long before any systematic observation is possible in that interesting, but turbulent, country. But an observatory has existed for some years past at Quetta, and, although its elevation is

* Nature, vol. xxiii, p. 400.

not known with sufficient precision to admit of its barometric register being reduced to terms comparable with those of the Sind and Punjab stations, I have compared the oscillations of the Quetta barometer with those in the valley of the Indus, when barometric minima have appeared in Upper Sind, and find that, with two very doubtful exceptions, in January and February 1880, any fall of pressure at Quetta was either simultaneous with the fall in Sind, or somewhat later. In one of these exceptional instances, there was a slight fall at Quetta two days, and in the other one day, before it took place at Jacobabad; but on both occasions, the great fall, when the minimum was established in Upper Sind, was simultaneous at both stations. In such cases as that of the 25th January 1878 (when the minimum first appeared at Deesa) and those of January, February, and March 1881 (when a barometric depression which had existed in Western Rajputana throughout the cold season, was simply intensified immediately prior to the rainfall), there could be no question of a depression travelling from the westward.

But it is not only in North-Western India even, that barometric minima are occasionally formed in the winter months: in the case of the rain of the 10th to 13th January 1878, it first appeared on the western half of the Deccan plateau; in that of the 10th February 1879, a long trough-shaped depression ran through the heart of India from Belgaum to Lucknow, and, in that of the 15th to 18th February 1880, it was first established in the Central Provinces, whence it was transferred to the Punjab; and the distribution of pressure, in Northern India, became strikingly similar to that which characterizes the rainy season.

There is, then, no reason to doubt that, notwithstanding that Northern India is in general and on an average an area of high pressure in the winter season, relatively to lower latitudes, this condition is by no means constant or lasting. The atmospheric pressure, in extra-tropical India, more frequently than that of the peninsula, occasionally falls below that prevailing over the seas to the south, causing vapour-bearing currents to pour in from that direction; and these currents, in ascending around the seat of minimum pressure, chiefly on the east and north of the minimum, condense that vapour as rain (and on the hills as snow). This is a more or less regularly recurrent feature of the winter season.

Of the conditions which determine the formation of these barometric minima, but little can be positively asserted in the present state of our knowledge. That they do not originate in a local excess of temperature in the lower atmospheric strata, is abundantly apparent; the rise of temperature that, in general, precedes the rainfall, and is accompanied

with a rise in the relative and absolute humidity of the air, is simultaneous with the setting in of the southerly wind; and this change of wind implies a pre-existing reversal of the barometric gradient, which is the phenomenon to be accounted for. The following considerations may, however, be worthy of attention as tending to throw some light into the prevailing obscurity.

It has been shewn above, that, at the very moderate elevation of 7,000 feet over the outer Himalaya, the barometric gradient is on an average slightly, but distinctly, reversed. At greater elevations, it is most probable that the reversal is more decided, for I have shewn elsewhere* that at Leh (11,500 feet) the pressure in February is at its annual minimum, and the wind-registers of all our hill-stations establish the fact that, throughout the winter months, the prevailing winds are southerly. This preponderance is no doubt, in some measure, perhaps mainly, due to the fact that the observations are those of 10 A. M. and 4 P. M. only; at which hours the diurnal up-draught of the mountain winds, in an otherwise still atmosphere, is fully active. But I have myself witnessed at Darjeeling, in December, the effects of a strong steady current, sweeping overhead from the south-west, clothing the snowpeaks with cloud-banners. This strong southerly wind is, however, exceptional; and is that which precedes rain; and although it is not improbable that, at great elevations, there is a more or less steady flow of air towards Central Asia, to feed the outflow, at low levels, from the anticyclone which, as we know, normally exists in the winter over Northern and Central Asia, there is no reason to question that, up to a considerable elevation over Northern India, the more usual condition is one of comparative stillness or at most of light movement. And, in this state of the atmosphere, even a feeble local action, tending to reduce the density and therefore the pressure, may suffice to set up a centripetal influx of air which may in a short time produce a well-developed barometric minimum. How this may be brought about will be shewn presently.

The southerly surface winds that are invariably the precursors of precipitation, are not merely local; they prevail also far to the south, indeed over a great part of India; and they arrive charged with vapour gathered both from the sea and from the warmer land-surface of more southerly regions.

It seems not improbable, then, that the ulterior conditions which give rise to the winter rains, may have their seat in the more elevated or middle region of the atmosphere; and we must look to the formation of cloud as the condition which, by disturbing the thermal equilibrium

* *Indian Met. Memoirs*, vol. i, p. 224.

of the atmosphere, determines a convective current with a cyclonic circulation, and a barometric minimum. The prevailing calmness of the Punjab atmosphere, combined with a high degree of relative humidity in the winter months, affords conditions not unfavourable to this action.

Before proceeding further with this discussion, it will be of advantage to consider the distribution of the winter rainfall, its distribution both in time and space.

For this purpose it will not be necessary to illustrate the subject in great detail, and, instead of giving the means of individual stations, I shall summarize the data in the form of the averages of large areas. The following table gives the average amount of the fall in each of the months from November to March.

Summary of the Winter Rainfall of Extra-tropical India.

	Stations.	Inches of rainfall.					
		November.	December.	January.	February.	March.	Total.
Peshawar and Derajat	5	0·46	0·51	0·65	1·06	1·29	3·97
Hazara and Patwar	4	1·06	1·50	1·57	2·64	2·66	9·43
The four doabs	11	0·18	0·60	0·77	1·15	1·14	3·84
Eastern Punjab	11	0·07	0·58	0·91	0·95	0·95	3·46
Kangra, Sirmoor and Kumaon	11	0·18	1·01	2·10	2·80	2·54	8·63
N. W. P. & Oudh, Western half*	24	0·06	0·33	0·81	0·66	0·57	2·43
Ditto ditto, Eastern half	15	0·10	0·15	0·66	0·55	0·34	1·80
North Behar and Bhagalpore	5	0·08	0·10	0·58	0·53	0·45	1·74
Northern Bengal	8	0·34	0·12	0·43	0·79	1·18	2·86
Assam and Cachar	13	0·95	0·36	0·64	1·35	3·45	7·00
Upper Sind	3	0·08	0·16	0·23	0·37	0·44	1·28
Lower Sind, Cutch and Gujarat	18	0·08	0·07	0·11	0·16	0·06	0·48
Rajputana	20	0·09	0·27	0·11	0·31	0·15	0·93
Central India, &c.	24	0·16	0·19	0·42	0·40	0·23	1·40
Mirzapore and Chutia Nagpur	14	0·22	0·13	0·58	0·78	0·57	2·28
Lower Bengal	15	0·50	0·17	0·48	1·07	1·60	3·82

The above table includes the whole of extra-tropical India, and it is only in a portion of this region that the cold weather rainfall can be regarded as a well-marked and regularly recurrent phenomenon; having a distinct maximum, that is to say, in the winter or spring months and equally defined minima before and after. The variations, shewn in the above table, are considerable, both as regards the total amount and the epoch of the maximum. It is on the N. W. Himalaya

* The meridian of Lucknow is taken as the boundary.

and on the hills of the Northern Punjab that these rains are most copious, and that the maximum falls latest; the precipitation frequently taking the form of snow at all but the less elevated stations. In the extreme north-west, they attain their maximum in March and April; for the April rainfall (not shewn in the table) is about equal to that of March at Peshawar and in the hills of Hazara, while that of May and June is insignificant. But south of the Salt Range, and on the plains of the Eastern Punjab, the rainfall of February and March exceeds that of April. Still further to the south-east, throughout the greater part of the Gangetic plain, the maximum occurs still earlier, *viz.*, in January; and this holds good as far as Behar and the confines of Northern Bengal. This anticipation of the maximum is not due to the January rainfall of the Gangetic plain being heavier than that of the Punjab. On the contrary, it is rather less: but the decrease in a south and S. E. direction is much less rapid in January than in the subsequent months. In Northern Bengal, even the January maximum has vanished; and while the average rainfall of that month is only slightly less than in Behar and the eastern part of the N. W. Provinces, that of February is higher, and that of March shews a further considerable increase. So far, the course of the variation seems to resemble that of the N. W. Punjab; but the further steady increase of the fall in April, May, and June shews that this resemblance is fallacious, and that we have here to do with a phenomenon of a different order, *viz.*, the storm precipitation of the spring months, the characteristics of which are still more pronounced in the more easterly province of Assam. As a well-marked feature of the local meteorology, the cold weather rainfall does not extend, in an easterly direction, beyond the province of Behar.

Turning now to the regions somewhat further south, but still, for the most part, without the tropic, we see that in Upper Sind the total fall of the five months is very small, notwithstanding that it represents nearly one-third of that of the year; and also that, as in the Derajat, it reaches its maximum in March. In Lower Sind, Cutch, and Gujarat, the whole precipitation of the season is insignificant; but a maximum is still faintly indicated in February, and the same is more strongly marked in Rajputana, where the fall is about double as great. In Rajputana, it would appear that the December rainfall is almost as great as that of March; but this is mainly due to an exceptionally heavy rainfall in December 1877,* combined with the fact that the Rajputana registers extend over a shorter period than those of most other parts

* On this occasion nearly five inches of rain were registered at Banswara, between 3 and 4 inches at Jhalrapatam and Ulwar, and over 2 inches at Kotah, Deoli, and Bhurtpore.

of the country. I do not think, therefore, that, on the average of a long period of years, the November rainfall of Rajputana would be found to follow a different law of distribution from that of other provinces around. In Central India, including those portions of the Central Provinces and the N. W. Provinces that extend between the Jamna and the Satpura range, the total fall is again higher, with a maximum in January and February; and, still further east, in Mirzapore, South Behar, and Chutia Nagpur, it is again greater, with the maximum in February; but this apparent retardation of the maximum is evidently due to the inclusion of the early spring storms which in Chutia Nagpur become of relatively greater importance; and this is rendered further evident in the table for Lower Bengal.

The conditions which determine the storm precipitation of the spring months will be noticed elsewhere. Meanwhile, it results from the above analysis that the cold weather rainfall, as here considered, is that which takes place chiefly on the north and east of the barometric depressions, which are occasionally formed, in the winter months, in North-Western India. It is most copious where normally the winter temperature is lowest, *viz.*, on the N. W. Himalaya. It decreases rapidly to the south, and less rapidly to the south-east, and, in this latter direction, it blends into and becomes with difficulty distinguishable from the rainfall of the spring storms, which are, however, a phenomenon of a different order.

Having thus defined the area and noticed the general characteristics of the winter rainfall of North-Western India, I will return to the question of the origin of those barometric depressions which have been shewn to be the immediate precursors of the precipitation, or perhaps rather of simultaneous formation. The area above defined as that of the winter rains, is identical with that in which, as has long been known, the relative humidity of the air, instead of diminishing towards the interior of the country, increases with the increasing distance from the sea-coast. On page 203 of the *Indian Meteorologist's Vade Mecum* (Part II, para. 109), I described this phenomenon as follows: "In the maritime provinces (of India) there are but one (annual) period of maximum and one of minimum humidity; in the Punjab and in Central India and the North-Western Provinces, there are two annual maxima and two minima; and in the drier part of the first named province, the winter is the dampest season of the year * * * *. Stations on the coast line have, at all times of the year, a higher degree of relative humidity than those on the plains of the interior. But the rate of increase is very different at different seasons; and in consequence of the greater cold of Upper and extra-tropical India, in the first three months of the

year, the rule of increasing dryness with increasing distance from the coast holds good inland, only as far as Behar; and thence to the Punjab the relative humidity of the atmosphere increases steadily. It appears to be higher also through Central India, north of the Satpuras, but the meteorological statistics of this tract have not yet been sufficiently worked out to enable us to fix the limits of the area of higher winter humidity."

The above passage was written in 1876, only a year after the meteorological data for the whole of India had been, for the first time, concentrated in one central office, and when the system of observation had been but recently extended to many stations in Rajputana and Central India. It is, therefore, desirable to set forth, in a tabular form, some excerpts from the further evidence which has since been put on record; and, to this end, I give, in the following tables, first, the absolute humidity of the air as represented by the proportion of vapour in 1,000 parts (volumes) of air, second, the relative humidity, and, third, the cloud proportion (in thousandths of the sky-expanse*) in each of the six months November to April for four series of stations, three passing successively from east to west (or north-west) and representing respectively the Himalaya, the alluvial plain, and the plateau which extends between the latter and the Satpura range; and the fourth passing from south to north, beginning with stations south of the Satpura range, and terminating in the Punjab.

* The figures of the two latter tables are extracted from those of the average values of the several meteorological elements given in the Report on the Meteorology of India in 1881.

Mean Absolute and Relative Humidity of the Air and Proportion of Cloud in Northern India in the Winter and Spring Months.

Stations.	Elevation in feet.	Miles from Sea.	Volume of vapour in 1000 of air.						Percentage of saturation.						Cloud proportion $\frac{n}{1000}$.					
			November.	December.	January.	February.	March.	April.	November.	December.	January.	February.	March.	April.	November.	December.	January.	February.	March.	April.
Darjeeling,	6,712	375	12	9	9	10	12	15	75	73	78	78	71	77	439	425	569	592	531	614
Ranikhet,	6,069	730	10	8	8	8	10	11	58	56	59	60	55	47	122	270	344	461	378	335
Chakrata,	7,050	750	9	6	6	7	8	10	58	52	61	58	54	47	153	351	413	539	465	385
Murree,	6,344	750	7	6	5	6	8	10	43	49	48	57	51	50	315	455	516	541	595	520
Sangor Island,	6	0	22	17	18	22	27	32	74	73	75	77	78	80	248	180	180	188	356	474
Calcutta,	18	65	20	15	14	18	22	28	74	71	70	69	69	73	220	196	127	192	225	265
Jessore,	33	95	20	16	14	16	21	27	68	63	60	55	55	62	210	132	158	176	274	336
Berhampore,	66	176	18	14	12	14	18	22	72	71	69	65	58	62	257	194	215	192	291	320
Purneah,	125	295	17	14	12	13	16	21	70	69	66	59	55	56	93	107	122	113	140	150
Patna,	179	307	15	12	12	13	14	16	57	60	60	55	43	39	176	201	249	275	315	233
Benares,	267	368	13	10	10	11	12	13	62	64	63	57	43	36	120	162	222	240	217	184
Allahabad,	307	430	14	12	11	12	13	15	63	68	67	60	46	36	92	163	193	222	189	143
Lucknow,	369	550	12	10	10	11	14	15	53	58	59	55	46	37	91	192	282	333	291	222
Bareilly,	568	665	13	10	10	11	14	15	59	64	64	61	53	41	67	177	271	309	261	177
Roorkee,	887	690	12	10	10	10	12	12	57	64	65	62	52	36	87	222	285	358	264	227
Ludhiana,	812	690	10	9	9	11	12	15	51	62	63	63	57	50	155	249	333	389	386	264
Sialkot,	829	717	11	10	10	10	13	14	56	68	68	67	58	42	214	309	404	443	448	367
Rawalpindi,	1,652	730	10	9	8	9	12	16	62	67	67	68	63	59	199	305	388	442	439	382

Mean Absolute and Relative Humidity of the Air and Proportion of Cloud in Northern India in the Winter and Spring Months (Continued).

Stations.	Elevation in feet.	Miles from Sea.	Volume of vapour in 1000 of air.						Percentage of saturation.						Cloud proportion $\frac{n}{1000}$.					
			November.	December.	January.	February.	March.	April.	November.	December.	January.	February.	March.	April.	November.	December.	January.	February.	March.	April.
Hazaribagh,	2,010	205	12	10	9	10	10	12	53	52	51	44	36	32	203	192	236	211	258	262
Sutna,	1,040	450	10	8	8	9	8	10	42	48	47	41	29	25	137	162	216	292	262	252
Jhansi,	855	490	10	9	9	10	11	12	39	45	47	42	34	28	29*	38*	66*	75*	40*	46*
Neemuch,	1,639	280	9	7	7	8	9	11	35	38	35	35	30	26	63	149	151	310	234	230
Ajmere,	1,611	410	11	9	9	10	12	15	45	49	47	46	42	38	101	152	245	273	280	249
Raipur,	960	270	16	12	12	14	13	15	60	56	55	51	41	36	168	127	132	112	165	209
Nagpur,	1,025	350	14	12	11	12	11	13	52	50	49	42	32	28	257	238	233	194	255	305
Akola,	930	270	13	11	10	10	11	10	50	48	44	37	28	22	134	146	139	199	127	128
Jubbulpore,	1,351	420	13	10	11	12	13	13	57	56	58	53	40	32	171	197	218	238	246	217
Sutna,	1,040	450	10	8	8	9	8	10	42	48	47	41	29	25	137	162	216	292	262	252
Nowgong,	757	515	11	10	9	10	11	14	50	56	52	48	37	31	91	153	182	365	240	205
Jhansi,	855	490	10	9	9	10	11	12	39	45	47	42	34	28	29*	38*	66*	75*	40*	46*
Agra,	555	540	11	9	9	10	11	13	43	53	55	49	40	31	54	131	167	245	175	144
Delhi,	718	615	11	9	9	10	12	13	46	53	55	52	45	34	80	176	309	334	299	269
Ludhiana,	812	690	10	9	9	11	12	15	51	62	63	63	57	50	155	249	333	389	386	264

* The estimates of cloud proportion are probably affected by a large personal equation.

The above table confirms and justifies the description already quoted from the *Vade Mecum*, and also the generalization just given, that the area of the winter secondary rainfall maximum coincides with that in which there is also a winter secondary maximum of relative humidity. But it also brings into prominence some further facts, which assist in throwing much light on the causes of the rainfall. In the first place, it is to be noticed that the increase of the relative humidity of the later months, as we proceed from Behar towards the Punjab, is due, solely, to the fall of temperature; the absolute humidity being almost constant; but the latter is decidedly lower on the high ground of Central India and Rajputana, south of the Gangetic plain, than on the latter and in the Punjab. These two facts, *viz.*, the uniformity of the absolute humidity over the riverain tract, and its decrease on the higher ground to the south, indicate that it is mainly dependant on local evaporation; being, in fact, furnished by the rivers, the undried swamps left by the autumnal floods, and, in no small degree, probably, by irrigation and the rich vegetation of the green winter crops. In the second place, it is to be observed that this riverain tract also coincides with the region of lower normal pressure, to the north of the axis of maximum pressure, shewn on the normal baric charts, on Plate II. And lastly, the tendency to cloud formation follows, on the whole, the same laws of distribution as the relative humidity of the lower atmosphere, with, however, this important exception; that, except in April and to a slight extent in March, it is lower in the neighbourhood of the coast (in Lower Bengal), notwithstanding the higher relative humidity of the lower atmosphere, than in the Upper Provinces, where the rainfall generally originates.

Now putting together the several facts thus independently elicited from the study of our registers, we arrive, I think, at the outlines of a consistent theory of the production of the winter rainfall. We have, in the first instance, steady evaporation over an extensive moderately humid tract, at a comparatively low temperature, it is true, but in an atmosphere, the stillness of which allows of steady diffusion of the vapour to high levels, and the consequent formation of cloud. The slight disturbance of the baric equilibrium which follows (since the vertical decrease of temperature in a cloud-laden atmosphere is slower than in a clear atmosphere), is succeeded by a gentle indraught of warmer and more humid air from the south; for the Himalaya bars access to northerly winds. A vortex is then rapidly formed, accompanied with an increased cloud-formation, and speedily followed by precipitation; which takes the form of snow on the hills, and of rain over the river plains. The rainfall is invariably followed by a cool wind, and a wave of high barometric pressure from the west, which I can only

attribute to a drainage of cool heavy air from the valleys of the hills surrounding the Punjab and the high lands of Beloochistan and Afghanistan; air cooled by the precipitation on the mountains.

If the above view be true, the stillness of the atmosphere, combined with the presence of a moderate evaporation, must be accepted as the condition which primarily determines the formation of barometric minima and the winter rains of Northern India. And this stillness is obviously due to the existence of the lofty mountain ranges which surround Northern India, leaving free access to the plains open only to the south.

Were the Himalayan chain absent and replaced by an unbroken plain, stretching up to the Gobi desert, it is probable that the winter rains of Northern India would cease; any local evaporation in the Punjab and Gangetic valley would be swept away by strong dry N. E. winds blowing from the seat of high pressure, which, in the winter months, lies in Central Asia; and instead of the mild weather and gentle breezes which now prevail at that season, on the Arabian Sea, it would be the theatre of a boisterous and even stormy monsoon, such as is its local equivalent of the China Seas. Other and even greater changes of climate, that would supervene on the suppression of the Himalayan range and the consequent alteration of the summer monsoon, its precipitation, and the course of the land drainage thereby fed, it would be beyond the province of my present subject to discuss.

II.—*Descriptions of some new Asiatic Diurnal* Lepidoptera; *chiefly from specimens contained in the Indian Museum, Calcutta.*—*By* Frederic Moore, F. Z. S., A. L. S. *Communicated by the* Natural History Secretary.

[Received May 14th,—Read June 4th, 1884.]

Family NYMPHALIDÆ.

Subfamily Satyrinæ.

Genus Ypthima, Hübner.

Ypthima mahratta, n. sp.

Male and female. Upperside brown; forewing with a subapical bipupilled ocellus; between which and the outer margin is a pale brown curved fascia as in *Y. newara*: hindwing with a very small subanal unipupilled ocellus.

Underside pale whitish-brown, very numerously covered with short delicate pale brown strigæ, which are uniformly disposed: forewing with

a brownish marginal fascia, which curves below the ocellus and extends up the disc towards the costa: hindwing with a very small apical ocellus, and two anal ocelli of the same size.

Expanse $1\frac{1}{16}$ to $1\frac{4}{16}$ inch.

Hab. Deccan (*Dr. Day*). In coll. F. Moore.

Allied to *Y. ariaspa*, *Y. rura*, and to *Y. norma*. Nearest to *Y. norma*, the type specimens of which are from China. Differs from the last species, on the upperside, in having a smaller ocellus on the forewing, and a single subanal ocellus on the hindwing. Underside with shorter and more numerous strigæ; both the apical and the two anal ocelli of hindwing are half the size of those in *Y. norma*.

The hindwing also has a comparatively longer costal margin, which thus gives the apex and exterior margin less convexity.

YPTHIMA APICALIS, n. sp.

Male. Upperside pale brown: forewing with a small rounded bipupilled apical ocellus, above which is a distinct broad whitish streak: hindwing with two very small subanal ocelli, the upper one minute, the anal and apical ocellus of the underside being slightly visible from above; across the middle of the lower discal area is a faint pale slight fascia. Underside pale brownish-ochreous, with indistinct darker brown uniformly disposed strigæ: forewing with the apical ocellus and white upper streak as above: hindwing with a small apical and three lower ocelli, the anal one bipupilled; an indistinct pale whitish fascia is traceable across the disc above the lower ocelli.

Expanse $1\frac{3}{8}$ inch.

Hab. Deyra Dhoon (*Godwin-Austen*). In coll. F. Moore.

YPTHIMA KASMIRA, n. sp.

Male and female. Upperside dark brown: forewing with a moderately small bipupilled apical ocellus: hindwing with two small subanal ocelli in male and, in female, a third minute anal ocellus.

Underside purpurascent brownish-white, densely covered with uniformly disposed purplish-brown strigæ: forewing with prominent apical ocellus: hindwing with prominent large apical and three lower ocelli, the anal one tripupilled.

Expanse ♂ $1\frac{3}{8}$, ♀ $1\frac{3}{8}$ inch.

Hab. Cashmere (*Capt. Hellard*). In coll. F. Moore.

YPTHIMA HOWRA, n. sp.

Male and female. Upperside brown: forewing with a bipupilled apical ocellus: hindwing with two small subanal ocelli, some specimens

of both sexes also having a smaller anal ocellus, all with a single pupil. Underside yellowish ochrey-white: forewing with the ocellus as above: hindwing with a very small apical ocellus and four lower ocelli, the two anal being geminated and the smallest. Both wings are crossed by ochreous-brown strigæ; with the three outer transverse fasciæ on forewing, and an angulated discal fascia, as well as a sinuous marginal fascia, on the hindwing.

Expanse ♂ $1\frac{3}{8}$, ♀ $1\frac{1}{8}$ inch.

Hab. Calcutta. In coll. Ind. Mus., Calcutta, and F. Moore.

Nearest to *Y. hübneri*. Distinguishable from typical specimens (figured as *Y. philomela*, Hubner, Zutr. fig. 83-84), on the underside, by the yellowish ochreous-white ground-colour, and the transverse fasciæ on the hindwing, as well as by the small size of the ocelli.

Ypthima horsfieldii, n. sp.

Male. Upperside dark olive-brown; discal area dusky; subapical ocellus oval, bipupilled: hindwing with two medial and a minute anal ocellus.

Female. Upperside: forewing with a large rounded ocellus: hindwing with two larger medial, a small anal, and a medium-sized apical ocellus. Underside of male and female ochreous-white: forewing almost covered with dark vinous-brown confluent strigæ: hindwing very sparsely covered with slender brown strigæ very similarly disposed to those in the typical Javan *Y. pandocus*: ocellus of forewing as above: hindwing with two small apical, two larger medial, and two smaller anal ocelli.

Expanse ♂ $1\frac{4}{10}$, ♀ $1\frac{6}{10}$ inch.

Hab. Java. In coll. F. Moore.

Subfamily Nymphalinæ.

Genus Euthalia, Hübner.

Euthalia andersonii, n. sp.

Male and female. Upperside dark umber-brown, palest in the female; both wings with a marginal bluish-grey band, which extends very narrowly from the apex of forewing and widens across the hindwing to broadly above anal angle. Within and beneath the cells the black streaks are most distinct in the female; across the discal area are two indistinct dusky sinuous fasciæ widening from the costa of forewing, at which end the interspace is slightly paler in the male and distinctly paler in the female. Cilia white.

Underside ochreous-brown in male and yellowish ochreous in female; the outer borders broadly suffused with purplish lilacine-white; cell-marks distinct; across the disc of both wings are too dusky lunular fasciæ with pale interspace, most distinct in the female, the fasciæ being disposed across the middle of the disc.

Expanse ♂ 2¼, ♀ 2¾ inches.

Hab. Mergui; Tavoy. In coll. Ind. Mus., Calcutta, and F. Moore.

Nearest allied to *E. cocytus*, Fab.; also to *E. lepidea*, Butler, and to *E. macnairii*, Distant.

Genus Cirrhochroa, Doubleday.

Cirrhochroa abnormis, n. sp.

Male. Upperside ferruginous-yellow: forewing with a medial discal transverse black lunular waved band, which is broadest at the costal end, a narrower submarginal sinuous band, and a nearly straight marginal line, the interspace from the submarginal band and edge of the wing being suffused with black towards the apex; an indistinct dusky streak at end of the cell: hindwing with a medial discal transverse angulated black lunular band, which is broadest at the costal end; a submarginal lunular line, and a slender nearly straight marginal line; a row of minute black discal dots. Underside brownish-ochreous; a transverse medial slightly purpurascent band, with waved suffused dusky lunular inner border and slender almost straight outer border, the band being quite narrow where it crosses from fore to hindwing and broadly dilated at the costal end on forewing and at anal end on the hindwing; contiguous to the inner border of the band is a similar dusky suffused lunular fascia, the interspace being of a slightly pale yellowish colour; at end of each cell is a dusky double lunular mark, a similar double lunular waved line also extends from middle of the cell on forewing to below the cell on the hindwing; outer border of both wings traversed by faint traces of a yellowish submarginal lunular band; on the forewing is a conspicuous and whitish apical patch, and on the hindwing is a row of very small blackish transverse discal dots.

Expanse 2⅝ inches.

Hab. Darjiling. In coll. F. Moore.

Genus Ergolis, Boisd.

Ergolis tapestrina, n. sp.

Male and female. Comparatively smaller than *E. merione*; outline of forewing more irregular. Upperside paler; with similar transverse sinuous lines on both wings, the two medial lines being somewhat nearer

together, the discal cordate marks having their outline of a uniform width, and being somewhat narrower transversely, thus leaving a slightly but perceptibly wider space between the contiguous lines; the interspaces between the basal lines, the subbasal and medial lines, the discal cordiform marks, and the marginal line and outer margin, are of a more dusky colour, and thus give the wings the appearance of being marked with alternately pale and dusky transverse bands. Underside also paler than in *E. merione*, with more regularly alternate pale and dark transverse bands.

Expanse $1\frac{6}{8}$ to $2\frac{1}{8}$ inches.

Hab. N. W. India (Manpuri; Deyra Doon). In coll. F. Moore.

Ergolis indica, n. sp.

Differs from typical Javanese specimens of *E. ariadne* in its smaller size. Upperside of a duller colour, the markings more obscure and comparatively less sinuous. Underside with paler interspaces between the bands, the apical border of forewing and the marginal border of hindwing greyer, and comparatively broader.

Expanse $1\frac{5}{8}$ to $1\frac{6}{8}$ inch.

Hab. Madras; Nilgiris; Bombay; Calcutta. In coll. F. Moore.

Family LYCÆNIDÆ.

Genus Parapithecops, Distant.

Parapithecops gaura, n. sp.

Male and female. Upperside brown: forewing with a large white medial longitudinally oval spot, occupying the centre of the wing from middle of the disc to near the base; a small brown dentate spot at upper end of the cell: hindwing with the apical and upper discal area broadly white and traversed by pale brown veins; a slender brown submarginal line enclosing a marginal row of brown spots. Cilia of forewing whitish posteriorly, of hindwing entirely white. Underside greyish white: forewing with a submarginal line composed of slender waved brown lunules, and a marginal line enclosing a row of small linear spots; a slender indistinct brown streak at end of the cell, and three or four dots along the costal edge: hindwing with an irregular submarginal row of brown lunules, a marginal line enclosing a row of darker spots; a black spot at upper end of submarginal line, and a subbasal row of three smaller more or less distinct black spots; a slender brown streak at end of the cell. Antennæ black, ringed with white; pale white beneath, third joint and tip of second black; legs white, banded with black.

Expanse ♂ $\frac{8}{10}$, ♀ $1\frac{1}{12}$ inch.

Hab. Calcutta. Assam. In coll. Ind. Mus., Calcutta, and F. Moore.

Genus Megisba, Moore.

Megisba sikkima, n. sp.

Male. Differs from *M. thwaitesii*, on the upperside, in being of a darker violet-brown, and in the absence of the short oblique posterior white band on the forewing. Underside similarly marked to *M. thwaitesii*, except that on the forewing the black spot in middle of the cell is very minute, and there is a spot below the end of tho cell between the middle and lower median veins in addition to the two dots, which are here placed beneath the lower median vein, whereas in *M. thwaitesii* the two latter dots, when present, are situated between the middle and lower medians. On the hindwing the three transverse subbasal black spots are comparatively larger, the upper one with two contiguous black dots in front; the cell-spot is prolonged upward to the costal vein and also has some black dots below it, the apical black spot is of an elongated form, and the discal macular band is composed of broader quadrate spots.

Expanse $\frac{7}{8}$ inch.

Hab. Sikkim. In coll. Indian Museum, Calcutta.

Pathalia, n. g.

Closely allied to *Megisba*: forewing comparatively longer, and less regularly triangular in form: hindwing somewhat narrower, and with a slender tail at end of lower median vein. Venation similar. Second joint of palpi shorter, the third joint longer and more slender.

Type, *P. albidisca*.

Pathalia albidisca, n. sp.

Male and female. Upperside dark violet-brown: forewing with a broad medial conical white patch, which extends obliquely from middle of the disc to posterior margin: hindwing with a broad white band crossing from the costal edge to near middle of the abdominal margin; an indistinct marginal row of pale-bordered brown spots. Underside greyish-white: forewing with some black spots along the costal edge, a brown streak at end of the cell, a discal transverse row of short oblique slender interrupted lunules, a submarginal sinuous line enclosing a marginal row of indistinct spots: hindwing with a similar brown cell-streak, a discal zigzag series of broader lunules, a sinuous submarginal line enclosing the marginal row of spots, of which the penultimate is large and black; three equidistant subbasal black spots, a black spot on the abdominal margin above the lower subbasal, and a larger black spot at the apex; tail in both sexes black, tipped with white. Cilia edged with

white. Body above black, antennæ black annulated with white; palpi white, tip black; legs white with black bands.

Expanse ♂ $\frac{11}{12}$, ♀ $1\frac{1}{12}$ inches.

Hab. Chittagong; Kurdah, Orissa; N. W. Himalaya (*Capt. Beckett*). In coll. Indian Museum, Calcutta, and F. Moore.

PATHALIA MALAYA.

Lycæna malaya, Horsfield, Catal. Lep Mus. E. I. C. p. 70 (1828), ♀.

Hab. Java. (Horsfield collection.)

Genus LOGANIA, Distant.

LOGANIA SUBSTRIGOSA, n. sp.

Upperside dark violet-brown. Cilia white between the veins. Costal edge of forewing with a minute white dot at end of the veins. Underside purplish white, crossed by a few ochreous-brown short strigæ, and with a thicker streak across middle and end of the cell, and in a zigzag submarginal series; also a marginal series of black spots on the forewing, and a lunular streak on hindwing; a black costal spot also on the hindwing; and the outer marginal border of both wings is ochreous-brown. Body, antennæ, and legs above brown; palpi, legs, and abdomen beneath white.

Expanse $\frac{9}{10}$ inch.

Hab. Mergui. In coll. Indian Museum, Calcutta.

LOGANIA MARMORATA, n. sp.

Upperside pale purplish violet-brown: forewing with the basal half, curving obliquely from middle of the costa to posterior margin near the angle, violaceous-white: hindwing with the lower basal and discal area also violaceous-white: the traversing veins on both wings being pale violet-brown. Cilia violet-brown. Underside densely mottled with purplish violet-brown and violet-white, interspersed with black speckles, which are most prominent in a lunular marginal fascia; a white spot at end of the cells. Body, antennæ, and legs violet-brown.

Expanse $\frac{8}{10}$ inch.

Hab. Mergui. In coll. Indian Museum, Calcutta.

LOGANIA ANDERSONII, n. sp.

Female. Upperside pale violet-brown: forewing with a broad longitudinal medial lilacine-grey band of a somewhat triangular form, disposed below the cell, the exterior border of the band being scalloped: hindwing with a narrow medial discal similar-coloured band. Cilia

alternated with white. Underside purplish lilacine-white; both wings with a blackish zigzag cell streak, a transverse discal zigzag duplex line, and two narrow similar submarginal lines, a slender marginal line, and a waved interciliary line.

Expanse $1\frac{1}{10}$ inch.

Hab. Mergui. In coll. Indian Museum, Calcutta.

Genus Lycænesthes, Moore.

Lycænesthes orissica, n. sp.

Male. Smaller than *L. lycænina* and *L. lycambes*. Upperside of a similar purpurascent blue. Underside pale purpurascent greyish-brown. Both wings with similar, but more regularly disposed, markings. On the hindwing the subbasal costal black spot is prominent, but the subbasal black spot—so conspicuous in the above species—is absent, the entire exterior margin being uniformly marked.

Expanse $\frac{9}{10}$ inch.

Hab. Orissa. In coll. Indian Museum, Calcutta, and F. Moore.

Lycænesthes merguiana, n. sp.

Male. Upperside violet-blue: hindwing with two indistinct small anal blackish spots and a larger subanal spot. Underside dull greyish-brown; forewing with a transverse antemedial pale-bordered band, a short band at end of the cell, and a broken discal band, two submarginal pale lunular lines: hindwing with a pale-bordered subbasal band, one at end of the cell, and a broken curved discal band; two submarginal pale sinuous lines enclosing a small anal and a large oval subanal black spot, both surmounted by a yellow lunule and speckled with a few metallic-blue scales.

Expanse $\frac{9}{10}$ inch.

Hab. Mergui. In coll. Indian Museum, Calcutta, and F. Moore.

A much smaller species than *L. bengalensis*. Distinguished from it, on the underside, in the forewing having the antemedial pale-bordered band, and in the hindwing in the more irregular and zigzag pale bands, and the large subanal spot. It is also distinct from *L. lycæna*.

Genus Lycæna, Fabr.

Lycæna chamanica, n. sp.

Female. Upperside lavender-blue; extreme outer margin of forewing pale dusky-brown: hindwing with pale dusky-brown costal and

marginal border, the latter traversed by an outer row of whitish lunules. Cilia dusky-brown, edged with white. Underside lilacine ochreous-grey: forewing with a large white-bordered black lunule at end of the cell, a discal transverse row of six spots, and a marginal row of white-bordered dark brown spots, the transverse interspace between the discal and marginal spots also dark brown: hindwing with three straightly disposed transverse subbasal white-bordered black spots, a lunule at end of the cell, and a curved discal interrupted row of eight spots; a marginal row of rounded dark brown spots bordered by an inner dark brown lunular line; the anal and penultimate spot is black, speckled with metallic-blue scales, and surmounted by orange-yellow.

Expanse 1 inch.

Hab. Chaman, S. Beluchistan (April). In coll. Ind. Mus., Calcutta.

This species is quite distinct from *L. bracteala*, Butler.

Lycæna nadira, n. sp.

Female. Upperside dark olivaceous violet-brown: hindwing with a very faint trace of paler marginal lunules. Cilia brown, edged with white. Underside pale olivaceous-ochreous: forewing with an olivaceous white-bordered large black linear spot at end of the cell, and a recurved transverse discal row of six spots, a submarginal row of small blackish dentate spots, and a marginal row of linear spots: hindwing with three subbasal olivaceous white-bordered black spots, a lunule at end of the cell, a curved discal row of eight spots, a submarginal row of small blackish dentate spots, and a marginal row of short linear spots.

Expanse 1 inch.

Hab. Kabul. In coll. Indian Museum, Calcutta.

Quite distinct from *L. fugitiva*, Butler.

Lycæna bilucha, n. sp.

Male. Upperside brilliant, glossy, opalised, lilacine cobalt-blue, the exterior margin with a very slender black border. Cilia brown, with a broad white edge. Underside pale lilacine ochreous-grey, the base of both wings slightly metallic-green: forewing with a small round white-bordered black spot in middle of the cell, a prominent streak at end of the cell, a transverse discal row of seven spots, and a marginal double row of pale brown white-bordered lunules: hindwing with a prominent white-bordered black spot in middle of the cell, one above it, a less distinct spot below it, and a narrow spot on abdominal margin, a streak at end of the cell, and a discal curved interrupted row of eight spots; a

marginal row of white-bordered narrow black spots, each surmounted by a black-lined reddish lunule.

Expanse $1\frac{2}{10}$ inch.

Hab. Chaman, S. Beluchistan (April). In coll. Ind. Mus., Calcutta.

Genus Chrysophanus, Hübner.

Chrysophanus baralacha, n. sp.

Female. Differs from specimens of same sex of *C. phlæas* (var. *stygianus*) taken in the neighbouring country of Lahoul. Upperside: forewing golden-yellow, with a blackish quadrate spot in the middle of the cell, a larger spot at its end, three oblique subapical spots, and three lower discal spots, the lowest spot being the longest and curved; from the three subapical spots some black speckles proceed to the discocellular spot; the costal edge is very narrowly bordered with brown, and the exterior margin has a narrow macular brown border of half the width of that of the above-mentioned species: hindwing golden greyish-brown, with a broad pale red outer marginal band, which is very slightly indented with black at end of the veins on its outer border, and on the inner border by a row of indistinct blackish spots surmounted by blue-grey scales, above which is a discal row of five or six smaller black spots and also a black lunule at end of the cell. Underside of similar colour to that of above species: forewing with the spots as on upperside, but pale-bordered, and also a spot at base of the cell, two small spots on the costa above the discal series, and three linear spots on exterior margin above the angle, these latter spots being near the margin: hindwing with less defined red-streaked marginal band, the discal and other spots also comparatively larger.

Expanse $1\frac{3}{8}$ inch.

Hab. Baralacha Pass (16060 feet), Ladak. Taken in July 1879 by Mr. L. de Nicéville. In coll. Indian Museum, Calcutta.

Genus Aphnæus, Hübner.

Aphnæus tigrinus, n. sp.

Differs from typical *A. vulcanus* on the upperside of the forewing in the more prominent red bands, which, in the female, are conspicuously broader; there is also a slender marginal band, more or less indistinct in the male, but very distinct in the female; on the hindwing is a red marginal band extending from above the anal lobe partly up the exterior margin, this band in the female being curved and reaching the subcostal

vein. On the underside the bands are similar, but of a brighter red and with more clearly defined black borders.

Expanse 1 to $1\frac{2}{5}$ inch.

Hab. Lower Bengal, Calcutta, Maunbhoom, Orissa. In coll. F. Moore and Indian Museum, Calcutta.

APHNÆUS PEGUANUS, n. sp.

Male. Comparatively larger than *A. lohita*. Upperside similarly coloured, anal area dull red, the large black lobe-spot replaced by a few interciliary black and silver scales. Underside very pale reddish-ochreous; the bands dark red, somewhat narrower than in *A. lohita*: forewing with the streak at base longitudinal, narrow, and not extending above the costal vein; the short transverse broad end crossing the cell in *A. lohita* is here absent, the band crossing the middle of the cell is also shorter, the oblique discal and submarginal bands quite confluent at their posterior end, the inner costal band beyond the cell is short, and the next band is the longest, both being widely separated—whereas in *A. lohita* the inner band is the longest and the two are joined externally in the middle, the submarginal band is narrower, and the marginal band very slender: hindwing with the subbasal band composed of three well separated portions; anal lobe red, with a small interciliary black-speckled streak; the submarginal and marginal band narrower, the latter being interrupted in crossing the veins.

Expanse $1\frac{3}{10}$ to $1\frac{4}{10}$ inch.

Hab. Magaree, Pegu. In coll. F. Moore.

APHNÆUS HIMALAYANUS, n. sp.

Allied to *A. lohita*. Male and female much larger than typical Javanese specimens. Upperside similarly coloured; anal area duller red. Underside pale creamy-yellow; the bands similar, but of a darker purple-red, all comparatively broader, the marginal band conspicuously broader.

Expanse ♂ $1\frac{3}{10}$, ♀ 1 $\frac{4}{10}$ to $1\frac{7}{10}$ inch.

Hab. Nepal (*Ramsay*), Darjiling (*Elliot.*) In coll. F. Moore.

APHNÆUS KHURDANUS, n. sp.

Male. Upperside dark brown; base of forewing, and hindwing dark slaty-blue; anal lobe red, spots black. Underside dull pale purplish brownish-ochreous; markings very similar to those on underside of same sex of *A. trifurcatus*, but comparatively narrower and more regular in outline.

Expanse 1 to $1\frac{1}{10}$ inch.

Hab. Khurda, Orissa; Calcutta. In coll. Ind. Museum, Calcutta.

This species belongs to the *lohita*-group of *Aphnæus*. On the underside the markings are extremely like those in *A. trifurcatus*, but the upperside of the forewings has no red patch, as in *A. trifurcatus*. The colour of the upperside is also of a much darker tint; and the outline of the forewing is comparatively more triangular.

APHNÆUS ORISSANUS, n. sp.

Male. Forewing broader and less regularly triangular than in *A. khurdanus*; hindwing also less produced anally, and the exterior margin convex. Upperside dark brown; base of forewing, and hindwing, slaty-blue; anal lobe red, spots black. Underside pale ochreous-yellow; bands purple-red, similar to those in *A. peguanus*, with the marginal black black-streaked.

Expanse $1\frac{1}{16}$ inch.

HAB. Sonakhala and Bhatpara, Orissa. In coll. Ind. Mus., Calcutta.

APHNÆUS CONCANUS, n. sp.

Male and female. Nearest to the Ceylonese *A. lazularius*. Upperside similar. Underside pale reddish-ochreous; the bands dark purple-red, those on the forewing similar: hindwing with the subbasal band composed of three portions, the medial discal and submarginal bands disposed nearer together at their costal end, the submarginal straighter, and the three more or less confluent at their anal end.

Expanse $1\frac{3}{8}$ to $1\frac{5}{8}$ inch.

HAB. Bombay (*Dr. Leith*); Canara (*Ward*); Nilgiris (*Lindsay*). In coll. F. Moore.

APHNÆUS NIPALICUS, n. sp.

Male. Upperside dusky violet-brown, the lower basal and discal areas dark slaty-blue; anal lobe red, the black spots speckled with silvery-white scales. Underside dull sulphur-yellow, the bands of a slightly darker somewhat purpurascent yellow; forewing with an oblique oval black ring near base of the cell, a black-lined bar across middle of the cell from the costal edge, an oblique discal band from the costal edge, broken, but not disconnected, at lower end of the cell, a short upper discal bar, and two shorter subapical bars beyond, a submarginal band and a slender broken lunular marginal line; all but the last traversed by an extremely slight silvery line; beneath the cell is a dusky brown fascia, and a dusky streak also is at end of the submarginal band: hindwing with a small spot at base of the cell, three transverse subbasal oval black rings, a transverse medial band, broken at lower end, then bent upward to abdominal margin, and ending in a small ring-spot, and outer discal

upper band, a narrower submarginal band broken above anal angle and bent upward, all traversed by an extremely slight silvery line; anal lobe-spots large, black, surmounted by bright scarlet.

Female. Upperside paler dusky olive-brown: forewing with subapical darker spot bordered on each side by red; basal area below the cell slaty-grey: hindwing with the lower basal area slaty-grey; anal lobe as in male. Underside as in male.

Expanse ♂ 1½, ♀ 1⅝ inch.

Hab. Nepal (*Ramsay*). Sikkim. In coll. British Museum, and Indian Museum, Calcutta.

Nearest allied to *A. lunulifer*.

Aphnæus zebrinus, n. sp.

Male. Upperside dark brown, base of wings dark brownish violet-blue; anal black spot large, broadly bordered with red. Female. Upperside darker violet-brown, base of wings dark slaty violet-blue. Underside very pale ochreous, posterior border of forewing whitish. All the bands purplish-black, as in *A. zoilus*; forewing with the extreme costal edge black, the bands also extending from the costal edge; basal streak long and joined to the black costal border, with a cross bar from its upper end, and a band crossing the middle of the cell (both of which join the streak below the base of the cell), the oblique discal band and the transverse submarginal band are joined together at their lower end, and the two short upper discal bars are also joined together, the marginal band is broad with a very narrow interline between it and the submarginal band; hindwing with the upper basal streak slender, the subbasal band entire and continued to the angle of the discal band above the bright red anal area, black lobe-spots large, the discal and outer bands broad.

Expanse ♂ 1½, ♀ 1⅝ inch.

Hab. Ceylon. In coll. British Museum.

Nearest allied to the Andamanese species, *A. zoilus*. Distinguishable from it by its smaller size, by the bands on the forewing all starting from the extreme costal edge, by the oblique discal band and the submarginal band being broadly joined at their base, and by the marginal band being broader on both wings.

Aphnæus lilacinus, n. sp.

Male. Upperside brown: forewing with the basal and discal area, including the cell, pale lilacine-blue; a blackish spot at end of the cell: hindwing with the basal and medial area pale lilacine-blue; anal lobe

ochreous, with a very small silver-speckled black spot. Underside pale brownish-ochreous: forewing with two black rings in the cell, a band at end of the cell dilated beneath and extending obliquely to the submedian, a ringlet spot beyond end of the cell, an upper discal inwardly oblique double ringlet spot and a submarginal broad chain-like band, the lower ends dusky, and each traversed by a black silvery streak: hindwing with very indistinct traces of darker-coloured transverse subbasal, discal, and submarginal bands, which are traversed by silvery black streaks; anal spots minute, silver-speckled. The silvery streak traverses the middle of the markings, except on the submarginal band of both wings, where it extends along the outer border.

Expanse, $1\frac{3}{5}$ inch.

Hab. ? In coll. Indian Museum, Calcutta.

Euaspa, n. g.

Forewing short, broad, costa arched from the base, exterior margin erect, convex, posterior margin long, straight; first subcostal emitted at two-sixths and second at one-sixth before end of the cell, second bifid at two-thirds from its base, fourth and fifth from end of the cell; discocellular very slender, erect, waved; radial from its middle; cell broad, extending to half length of the wing; middle median from near end of the cell, lower at one-third before the end, submedian straight: hindwing short, very broad, exterior margin convex and slightly sinuous, with a single slender tail from end of lower median; costal and subcostal veins joined together at their base, costal much arched from the juncture; cell broad, extending to half length of the wing; first subcostal emitted at one-fifth before end of the cell; discocellular very slender, erect; radial from near its middle; two upper medians from end of the cell, lower at one-third before the end; submedian curved, internal short, recurved. Body short; palpi porrect, second joint long, extending half beyond front of the head, pilose beneath, third joint slender, one-fifth as long as the second; legs slender; antennæ thickened at the end, tip blunt.

Euaspa milionia.

Myrina milionia, Hewitson, Illust. D. Lep. p. 5, pl. 3, fig. 90, 80 (1869).

Hab. Nepal. Kangra.

Genus Hypolycæna.

Felder, Wien. Ent. Monats. vi, p. 293 (1862).

Male. Wings short, broad: forewing arched at the base, posterior margin nearly as long as the costal. Upperside with a large glandular

patch of scales extending broadly across end of the cell; four subcostal branches, the first emitted at two-fifths, second at one-fourth, and third from close before end of the cell; discocellular slender, straight; radial from its middle; cell extending to more than half length of the wing; lower median emitted at nearly one-third and middle median from near end of the cell; submedian straight: hindwing short, somewhat produced hindward, anal lobe prominent; with a slender tail from end of lower median and another from the submedian; costal vein much arched at the base; first subcostal emitted at one-third before end of the cell; the cell broad and extending to half length of the wing; discocellular recurved; radial from its middle; lower median emitted at nearly one-half and middle median from near end of the cell; submedian straight; internal recurved. Palpi porrect, second joint stout, third joint very long, of nearly the same length as the second; legs slender; antennæ with a gradually thickened club.

Type, *H. tmolus.*

Hypolycæna tmolus.

Hypolycæna tmolus, Felder, Wien. Ent. Monats. vi, p. 293 (1862). Hewits., Ill. D. Lep. p. 49, pl. 21, figs. 3, 6.

Hab. Philippines.

Hypolycæna sipylus.

Hypolycæna sipylus, Feld., Reise Novara, Lep. ii, p. 242, pl. 30, figs. 15, 16. Hewits., Ill. D. Lep. pl. 22, figs. 13, 14.
Myrina sipylus, Feld., Sitzb. Ak. Wiss. Wien, 1860, p. 451.

Hab. Amboina.

Hypolycæna tharrytas.

Hypolycæna tharrytas, Feld., Wien. Ent. Monats. vi, p. 294 (1862).
Hyp. sisyphus, Hewits., l. c. pl. 22, fig. 11, 12.

Hab. Luzon.

Hypolycæna erylus.

Polyommatus erylus, Godt., Enc. Meth. ix, p. 633, (1823).
Amblypodia erylus, Horsf., Catal. Lep. Mus. E. I. C. p. 111 (1829).
Hypolycæna erylus, Hewits., Ill. D. Lep. p. 49, pl. 21, figs. 1, 2, 4.

Hab. N. E. Bengal, Sikkim, Khasia Hills, Cherra Punji, Burmah, Malacca, Singapore.

Hypolycæna andamana.

Hypolycæna andamana, Moore, P. Z. S. 1877, p. 589.

Hab. Andamans.

Hypolycæna thecloides.

Myrina thecloides, Feld., Wien. Ent. Monats. iv, p. 395 (1860).

Hab. Malacca, Singapore.

Hypolycæna astyla.

Hypolycæna astyla, Feld., Wien. Ent. Monats. vi, p. 294 (1862); Reise Novara Lep. ii, p. 243, pl. 30, figs. 17, 18,

Hab. Philippines.

Drupadia, n. g.

Differs from typical *Hypolycæna* in the more triangular form of forewing, the costa being longer and more regularly convex, the exterior margin more oblique, and the posterior margin shorter and convex towards the base: hindwing somewhat shorter, the costa being very convex in the middle, the exterior margin truncated from the middle median, the male on the upperside with a prominent glandular patch of scales between the costal and subcostal veins, and with three tails, the middle one being long the others short. Second joint of palpi much longer and the third shorter and stouter.

Type, *D. ravindra* (*Myrina ravindra*, Horsf.).

Drupadia boisduvalii, n. sp.

Myrina lisias, Boisd., Spec. Gen. Lep. Pap. pl. 22, fig. 2 ♂ (*nec* Fabr.).

Male. Upperside: forewing purplish violet-brown, with a broad oblique transverse discal almost quadrate red band: hindwing cobalt-blue, darkest and purplish-violaceous anteriorly; costal border and abdominal margin violet-brown; cilia and tails edged with white.

Female. Upperside: forewing somewhat paler brown, the red band of the same width and quadrangular form as in male: hindwing pale violet-brown, the discal area somewhat red-streaked; above the tails are four black spots surmounted by lilac scales.

Underside: forewing ochreous-red, with a brighter red pale-bordered streak at base of the cell, a band across middle of the cell, another at its end, and a similar discal band which has a slightly dusky lunulated border at the upper outer end, a submarginal slender black slightly sinuous line: hindwing white, the costal border and apex being slightly red, with the basal and subbasal spots entirely black, a duplex slender black streak at end of the cell, a similar one above it, a discal zigzag duplex line, and

a single black submarginal line; a large anal and a subanal black spot surmounted by metallic-blue scales, which also traverse the intervening subanal space.

Expanse ♂ $1\frac{3}{8}$, ♀ $1\frac{11}{16}$ inch.

Hab. Moulmein; Mergui. In coll. F. Moore and Indian Museum, Calcutta.

Drupadia lisias (*Pap. lisias*, Fabr.) badly figured in Donovan's Ins. of India, pl. 40, fig. 1,—is distinct from the above. Both sexes of the type of *D. lisias* are in the British Museum Collection.

Drupadia fabricii, n. sp.

Female. Upperside: forewing violet-brown, with a slightly broader and more irregular-shaped oblique medial red band than in female of typical *D. lisias*, the band also having its outer border scalloped: hindwing paler brown, with grey-bordered anal marginal spots. Underside also differs from *D. lisias* in the apical area of forewing being suffused with a dusky tint; at the base of the cell is a small round pale-bordered spot, not an elongated triangular mark as in *D. lisias*, the short band crossing the middle of the cell is black, the streak at end of the cell is more distinct, the transverse discal band black-lined and blackish internally at upper end, the submarginal line also being broader and more prominent: hindwing with the markings less prominent than in *D. lisias*, the basal bar shorter, the outer costal narrow streak further from the second, the first bar between the subcostals being midway below the two outer costals, the three subbasal spots are small and widely separated, the bar at end of the cell and the spot beneath it are pale-centred, the zigzag discal interrupted band is composed of duplex streaks, which are wide apart with the interspace white.

Expanse ♀ $1\frac{5}{16}$ inch.

Hab. Mergui. In coll. Indian Museum, Calcutta.

Chliaria, n. g.

Male. Wings small: forewing triangular; costa gently arched; exterior margin obliqne, posterior margin straight; four subcostal branches, first emitted at one-third before end of the cell and slightly touching the costal vein near its end; second and third branches at equal distances apart; cell extending to nearly half length of the wing; discocellular extremely slender; one radial from near its middle; the middle median from near end of the cell, lower at one-third before the end; submedian nearly straight: hindwing short; apex convex, exterior margin oblique and waved; cell short, broad; costa arched from near

the base; first subcostal from near end of the cell; discocellular extremely slender, oblique; radial from its middle; two upper medians from end of the cell, lower at nearly one-half before the end; submedian straight; internal recurved; a slender tail from end of lower median and another from the submedian. Palpi porrect, second joint stout, third joint very slender; antennæ with a short spatular club.

Type, *C. othona*.

CHLIARIA OTHONA.

Hypolycæna othona, Hewits., Illust. D. Lep. p. 50, pl. 22, fig. 17, 18 (1865).

HAB. Darjiling. Khasia Hills.

CHLIARIA ELTOLA.

Hypolycæna eltola, Hewits., Illust. D. Lep. Suppl. p. 14, pl. 5, fig. 37, 38 (1869).

HAB. Andamans.

CHLIARIA KINA.

Hypolycæna kina, Hewits., Illust. D. Lep. Suppl. p. 13, pl. 5, fig. 32, 34 (1869).

HAB. Sikkim. Nepal.

CHLIARIA CHANDRANA.

Hypolycæna chandrana, Moore, P. Z. S. 1882, p. 249, pl. xi, fig. 2, 2a.

HAB. Lahul, N. W. Himalaya.

CHLIARIA CACHARA.

Hypolycæna cachara, Moore, P. Z. S. 1883, p. 527, pl. xlix. fig. 6.

HAB. Cachar.

CHLIARIA NILGIRICA.

Hypolycæna nilgirica, Moore, P. Z. S. 1883, p. 527, pl. xlix, fig. 8.

HAB. Nilgiris.

SINTHUSA, n. g.

Male. Wings small: forewing somewhat broad, costa arched at the base, apex pointed, exterior margin slightly oblique and convex, posterior margin convex near the base; subcostal vein five-branched, first branch emitted at nearly one-half, second at one-fourth, and third from near the end of the cell, third bifid near its end; cell extending to half length of

the wing; discocellular slender; radial from its middle; lower median at more than one-third and middle median from near end of the cell; submedian straight: hindwing short, broad, costa arched in the middle, exterior margin with a single slender tail from end of lower median; cell broad, triangular, extending half the wing; first subcostal at one-half before end of the cell; discocellular oblique, slender; radial from its middle; lower median at nearly one-half and middle median from near end of the cell; submedian and internal veins recurved. Palpi porrect, second joint long, third joint short, slender, pointed; antennæ with a large thick pointed club.

Type, *S. nasaka*.

SINTHUSA NASAKA.

Thecla nasaka, Horsfield, Catal. Lep. Mus. E. I. C. p. 91 (1829).
Deudorix nasaka, Hewits., Illust. D. Lep. pl. 5, fig. 45, 46.

HAB. Java.

SINTHUSA MALIKA.

Thecla malika, Horsfield, Catal. Lep. Mus. E. I. C. p. 90 (1829).
Dipsas malika, Moore, Catal. Lep. Mus. E. I. C. I. pl. 1 *a*., fig. 5 (1857).
Myrina malika, Hewits., Illust. D. Lep. pl. 15, fig. 41—43.

HAB. Java. Sumatra.

SINTHUSA GROTEI.

Hypolycæna grotei, Moore, P. Z. S. 1883, p. 527, pl. 49, fig. 5.

HAB. N. E. Bengal (*Grote*).

Genus IOLAUS.

Hübner, Verz. bek. Schmett. p. 81 (1816-18).

Male. Forewing short, broad; costa very much arched from the base, apex acute, exterior margin very slightly oblique, posterior margin long, slightly convex in middle, the convex edge being fringed with long hairs; on the underside of the wing is a glandular patch of scales situated immediately above the submedian vein; cell broad, extending in length to half the wing; costal vein short; subcostal arched from the base, first branch emitted at one-half, second at one-fourth, and third immediately before end of the cell, third trifid at three-fourths from its base, fifth from end of the cell; discocellulars erect, upper shortest; radial from near their middle; the middle median emitted from near end of the cell, lower at one-fourth before the end; submedian straight:

hindwing short, lengthened hindward; costa very convex, apex almost angular, exterior margin very oblique and sinuous, lobate at anal angle, furnished with two short slender tails; on the upperside is a subcostal glandular patch of scales; costal and subcostal veins joined together for a short distance at their base, widely separated beyond, costal much arched from the basal juncture; cell broad, triangular; two subcostal branches, first emitted at one-third before end of the cell; discocellulars very oblique; radial from near their middle; two upper medians from end of the cell, lower at one-third before the end; median straight; internal short. Body moderate; palpi ascending, second joint long, ascending above level of the eyes, third joint half its length, slender; legs slender; antennæ slender, gradually thickened to end, tip pointed.

Type, *I. helius* (*helius*, Fabr.; Hewits., Ill. D. L. Suppl. pl. 4, f. 31.)

The typical species of *Iolaus* are African. The characters of the genus are here given for comparison with its Asiatic allies.

COPHANTA, n. g.

Forewing broad, costa arched, exterior margin slightly convex, posterior margin nearly straight; cell broad, extending to half length of the wing, costal vein extending to half the margin; first subcostal emitted at two-fifths and second at one-fourth before end of the cell, third bifid at nearly two-thirds from the base; discocellular slender, slightly bent outward in the middle; the radial from its angle; lower median at one-third and middle median from close before end of the cell; submedian straight: hindwing broad, costa abruptly arched at the base, apex convex, exterior margin oblique and sinuous from middle median, anal angle lobed, with a slender tail from lower median and another from submedian; costal and subcostal joined together for a short distance at the base, the costal much arched from above the juncture, and extending to the apex; first subcostal emitted at one-fifth before end of the cell; discocellular outwardly oblique and bent outward at the middle; the radial from its angle; cell broad, extending to nearly half the wing; lower median at one-third and middle median from immediately before end of the cell; submedian straight; internal recurved. Body short, thick; palpi porrect, second joint long, extending half length beyond the eyes, third joint slender, slightly fusiform, nearly half length of the second; antennæ short, stout, with a gradually thickened club; legs short.

Type, *C. illurgis*.

COPHANTA ILLURGIS.

Iolaus illurgis, Hewitson, Illust. D. Lep. Suppl. p. 10, pl. 4, fig. 37, 38 (1869).

HAB. Darjiling.

COPHANTA MACULATA.

Iolaus maculatus, Hewits., Illust. D. Lep. p. 47, pl. 21, fig. 29, 30 (1865).

HAB. Silhet. Darjeeling.

DACALANA, n. g.

Male. Forewing comparatively more triangular than in typical *Iolaus* (*I. helius*), the exterior margin being somewhat oblique, and the posterior margin shorter; venation similar; on the upperside of the typical species, between the median and submedian veins, is a tuft of fine hairs covering a small glandular-scaled spot, and on the underside there is also a tuft of hairs on the middle of the posterior margin: hindwing comparatively broader, being less produced hindward, the apex more convex, and the glandular subcostal spot less prominent.

Type, *D. vidura* (*Amblyp. vidura*).

DACALANA VIDURA.

Amblypodia vidura, Horsf., Catal. Lep. Mus. E. I. C. p. 113, pl. 1, fig. 6, 6a. ♂, (1829).

HAB. Java. Borneo.

DACALANA BURMANA, n. sp.

From typical Javan *D. vidura*, this differs in the darker blue of the upperside. The colour of the underside is also brighter and of an ochreous-brown tint, the transverse white band is somewhat broader, the submarginal black line composed of short curved portions between the veins, and the whole series forms a more curved line in crossing each wing; the black subanal and lobe-spot is slightly smaller, and the former is but very slightly surmounted with red.

Expanse ♂ $1\frac{1}{2}$ inch.

HAB. Moulmein. In coll. British Museum.

DACALANA COTYS.

Iolaus cotys, Hewitson, Illust. D. Lep. p. 43, pl. 19, fig. 19, 20 (1865).

HAB. Nepal. Darjiling.

Genus Pratapa, Moore.

Pratapa bhotea, n. sp.

Female. Upperside purpurascent greyish-blue: forewing with the anterior margin from the costal vein, the apex broadly, and the exterior margin violet-brown; cilia grey: hindwing with a marginal row of narrow violet-black spots ending in a red anal lobe-spot; a slender black marginal line; cilia greyish-white; the two tails black with white cilia.

Underside glossy purpurascent greyish-white: forewing with an indistinct darker bluish-grey streak at end of the cell, and two slender lunular fasciæ along exterior margin; a transverse discal slender prominent black broken sinuous line: hindwing with a similar cell streak and outer marginal fasciæ, the latter darkest at anal end; a jet black anal lobe-spot, on which are a few scarlet scales and some turquoise-blue scales along its inner border; a transverse discal zigzag slender black broken line ending upward above the anal lobe.

Expanse $1\frac{1}{2}$ inch.

Hab. Sikkim. In coll. Indian Museum, Calcutta.

Remelana, n. g.

Male. Forewing less triangular than in *Tajuria* (*T. longinus*, Fabr.), the costal margin more abruptly arched at the base, exterior margin slightly convex, posterior angle rounded: hindwing broader and less produced hindward; costa less arched at the base, very convex externally, with a slender tail from end of lower median and another from the submedian, abdominal margin short. Palpi shorter, second joint stouter, and third joint longer; antennæ shorter, tip shorter and more regularly clavate. Venation similar.

Type, *R. jangala*.

Remelana jangala.

Amblypodia jangala, Horsfield, Catal. Lep. Mus. E. I. C. p. 113 (1829), ♀; Moore, ibid. p. 40, pl. 1 a, f. 11, ♂.

Hab. Java. N. E. Bengal.

Remelana travana.

Myrina travana, Hewitson, Illust. D. Lep. p. 38, pl. 17, f. 59-60 (1865) ♂.

Hab. Sumatra. Singapore. Borneo.

APPORASA, n. g.

From *Thaduka* this differs in the forewing having the exterior margin biangulated and produced outward below the apex. In the hindwing the costa is longer, arched at the base, and produced to an upward angle at the apex; the exterior margin is deeply scalloped; it also has three shorter tails. Palpi long, porrect, second joint extending two-thirds beyond the eyes, third joint also long and slender, being half the length of second; antennæ stouter and blunt at tip.

APPORASA ATKINSONI.

Amblypodia atkinsoni, Hewits., Catal. Lyc, Brit. Mus. p. 3. pl. 8, fig. 92, 93 (1862).

HAB. Moulmein.

SATADRA, n. g.

Forewing comparatively longer and narrower than in typical *Panchala*, the costa abruptly arched at the base, exterior margin oblique: hindwing slightly but regularly arched along the costa, apex very convex, exterior margin oblique, with a slender tail at end of lower median vein and a point at end of both the middle median and submedian. Venation similar to that of *Panchala*.

Type, *S. atrax*.

SATADRA ALEA.

Amblypodia alea, Hewits., Catal. Lyc. B. M. p. 12, pl. 7, fig. 79, 81 (1862).

HAB. India.

SATADRA SELTA.

Amblypodia selta, Hewits., Ill. D. Lep. p. 14. pl. 3a, f. 36, 37 (1869).

HAB. Moulmein.

SATADRA AGABA.

Amblypodia agaba, Hewits., Catal. Lyc. B. M. p. 8, pl. 4, f. 39, 40 (1862).

HAB. India.

In the Hewitson Cabinet this species is placed under *S. alea*.

SATADRA BUPOLA.

Amblypodia bupola, Hewits., Ill. D. Lep. ii. Suppl. p. 21, pl. 8, fig. 44, 45 (1878).

HAB. Nepal. Darjiling.

SATADRA BAZALUS.

Amblypodia bazalus, Hewits., Catal. Lyc. B. M. pl. 4, fig. 37, 38 (1862) ♂.

HAB. Nepal.

SATADRA ATRAX.

Amblypodia atrax, Hewits., Catal. Lyc. B. M. p. 13, pl. 7, fig. 80, 82 (1862).

HAB. Nepal.

SATADRA ANTHELUS.

Amblypodia anthelus, Doubleday and Hewits., Gen. D. L. pl. 74, f. 6 (1852). Hewits., Catal. Lyc. B. M. pl. 3, f. 23. 24.

HAB. Moulmein.

SATADRA CANARAICA, n. sp.

Allied to *S. alea* (*Amblypodia alea*, Hewits). Male and female. Upperside of a more purplish violet-blue than in *S. alea*, the marginal black border comparatively narrower in the male. Underside of a darker purplish violet-brown: forewing with the basal spots darker, the two cell-spots very small and round, the discocellular spot and the two below the cell narrower, the transverse discal band regular and not broken on the upper median vein, the submarginal and marginal lunules obsolescent: hindwing with the basal and subbasal spots darker and very small, the discal zigzag band narrower and less distinct, the submarginal and marginal lunules obsolescent; anal angle less speckled with metallic-green scales, the anal black spot only present.

Expanse ♂ $1\frac{3}{8}$, ♀ $1\frac{6}{8}$ inch.

HAB. Canara, S. India (*Ward*). In coll. F. Moore.

In *S. alea* the underside is uniformly purplish-brown, the markings all of a regular colour and distinctly lined with pale purplish-white.

SATADRA CHOLA, n. sp.

Closely allied to *S. areste* (*Amblypodia areste*, Hewits.). Male. Upperside of a comparatively darker purplish blue, the marginal black borders being one half less the width. Female. Upperside also with the blue area extending comparatively more over the disc. Underside: forewing more dusky olive-brown in colour, with much narrower whitish cell-streak, quadrate spot beneath it, and transverse discal band, the outer band being more defined: hindwing with similarly disposed markings except that the subbasal band is very broad and entire (not

macular as in *S. areste*), and the markings are all of a dark somewhat aenescent-brown, with pale pinkish-white borders and the interspaces pale pinkish violet colour (not grey as in *S. areste*) ; at the anal angle is a marginal black spot and another between the middle and lower median veins, both spots and the intervening marginal space speckled with metallic-green scales.

Expanse ♂ ♀ $1\frac{8}{10}$ inch.

Hab. Sikkim. In coll. Indian Museum, Calcutta, and F. Moore.

Satadra lazula, n. sp.

Male. Upperside of both wings entirely ultramarine-blue ; the extreme costal edge of forewing, the costal and abdominal borders of hindwing, and the cilia being black.

Female. Dark violet-brown, the forewing with ultramarine-blue within the cell and obliquely below on the disc, and narrowly on middle of the hindwing from base of the cell. Underside dark purple-brown : forewing with similarly disposed but broader markings than those in *S. chola*, the two outer bands purplish-violet : hindwing dark purple-brown, with similar markings to those in *S. chola*, the discal bands continuous, the interspaces brighter pink, the anal marginal spots small and more numerously green-speckled.

Expanse $1\frac{8}{10}$ inch.

Hab. Sikkim. In coll. Indian Museum, Calcutta, and F. Moore.

Satadra patuna, n. sp.

Female. Smaller than *S. lazula*. Upperside dark violet-brown, the basal and discal areas purplish-blue, paler than in *S. lazula*, but disposed as in female of that species. Underside purplish-brown : forewing with similarly disposed cell, streak, discal band, and lower quadrate patches, but of a pale ochreous colour : hindwing with the basal area broadly and entirely dark bright purple-brown (more like that of typical *S. apidanus*), which merges into a transverse broad pale purplish-ochreous inner discal fascia, and again into a dark purplish-brown outer discal fascia, the outer border of the wing being broadly pale purplish-brown ; across the disc are traced two series of indistinct brown-lined marks, which are similarly disposed to, but are less continuous than, those in *S. lazula* ; an indistinct brown marginal lunular line, but no metallic speckles at anal angle.

Expanse $1\frac{1}{2}$ inch.

Hab. Nepal (*General Ramsay*). In coll. F. Moore.

SATADRA CÆCA.

Amblypodia cæca, Hewits., Ill. D. Lep. p. 14, pl. 4, fig. 28 (1863).

HAB. Borneo (Sarawak).

SATADRA ARESTE.

Amblypodia areste, Hewits. Catal. Lyc. B. M. pl. 5. f. 43, 44 (1862).

HAB. Darjiling.

SATADRA FULGIDA.

Amblypodia fulgida, Hewits., Ill. D. Lep. p. 11, pl. 5, fig. 31 (1863).

HAB. [? Philippines]. N. India.

SATADRA CHINENSIS.

Arhopala chinensis, Feld., Reise Novara Lep. ii, p. 231, pl. 29, f. 10 (1865).

HAB. China.

SATADRA DIARDI.

Amblypodia diardi, Hewits., Catal. Lyc. B. M. p. 9, pl. 5, f. 41, 42, (1862).

HAB. Penang. Singapore.

SATADRA APIDANUS.

Papilio apidanus, Cram., Pap. Exot. ii. pl. 137. f. F. G. (1779).
Amblypodia apidanus, Horsf., Catal. Lep. Mus. E. I. C. p. 100 (1829).

HAB. Java. Sumatra. Borneo.

SATADRA ABSENS.

Amblypodia absens, Hewits., Catal. Lyc. B. M. p. 9, pl. 5, f. 51, 52 (1862).

HAB. Darjiling.

SATADRA ZETA.

Amblypodia zeta, Moore, P. Z. S. 1877, p. 590, pl. 58, f. 6.

HAB. Andamans.

ACESINA, n. g.

Forewing with the costa less arched than in *Panchala*, apex less pointed, exterior margin more oblique, and waved; fourth subcostal vein emitted further from end of the third: hindwing not so broad or quadrate in shape, the costa but slightly arched from the base, exterior margin more oblique and regularly convex, with a slender tail one-fourth of an an inch long from end of lower median vein; abdominal margin shorter. Antennal club somewhat shorter.

Type, *A. paraganesa*.

ACESINA PARAGANESA.

Amblypodia paraganesa, De Nicéville, Journ. Asiat. Soc. Bengal, 1882, p. 63.
Panchala paraganesa, Moore, P. Z. S. 1883, p. 530.
Amblypodia ganesa, Hewits., Catal. Lyc. B. M. pl. 7, f. 72 (1862).

HAB. Nepal.

DARASANA, n. g.

Forewing short, broad, triangular; apex acute, exterior margin very slightly oblique, posterior angle somewhat rounded: hindwing short, broad; costa arched towards the base, exterior margin very convex; no tail. Antennæ slender.

Type, *D. perimuta*.

DARASANA PERIMUTA.

Amblypodia perimuta, Moore, Catal. Lep. Mus. E. I. C. 1, p. 42 (1857). Hewits. Catal. Lyc. B. M. p. 12, pl. 6, fig. 65, 66.

HAB. Khasia Hills. Magaree, Pegu.

DARASANA NEWARA, n. sp.

Upperside violet-brown: forewing with the basal and discal area purplish violet-blue, which extends also above the cell to near the costal edge, the outer brown border being about one-tenth of an inch in width: hindwing with the basal area purplish violet-blue, the outer border being two-tenths of an inch in width. Underside pale-brown; with faint traces of pale-bordered marks within and beneath the cell, at its end, and a more distinct narrow macular discal and submarginal lunular band: hindwing with four indistinct pale-bordered darker brown basal spots, a similar subbasal series, a discal broken band, and marginal double lunular band.

Expanse $1\frac{3}{10}$ inch.

HAB. Nepal (*Genl. Ramsay*). In Coll. F. Moore.

Genus NARATHURA, Moore.

NARATHURA ROONA, n. sp.

Closely allied to, but smaller than *N. aroa* (*Amblypodia aroa*, Hewitson, Ill. D. Lep. p. 13, pl. 2, f. 12), from Sumatra. Female. Upperside dark violet-brown, costal edge and cilia paler: forewing with the basal and discal area, and the hindwing with the basal and medial discal area, violet-blue. Underside of a similar tint of brown to that in *N. aroa*, markings also similarly disposed, but with darker centres; on the forewing

the cell-spots are smaller and oval in shape, and the discal band broader; on the hindwing the basal spots are more rounded, the discal band more conspicuous and less zigzag in shape, and the submarginal and marginal lunular line more distinctly formed; at the anal angle is a black spot and another between the median veins, the spots and intervening space being speckled with metallic-green scales.

Expanse $1\frac{3}{10}$ inch.

Hab. Andaman Isles. In coll. Indian Museum, Calcutta, and British Museum (Hewitson Cabinet).

Genus Amblypodia, Horsfield.

Amblypodia andersonii, n. sp.

Male. Smaller than *A. taooana*. Upperside of a similar tint of ultramarine-blue; both wings with a much narrower black marginal border. Underside much darker-coloured, but similarly marked.

Expanse $1\frac{2}{10}$ inch.

Hab. Sampu, Mergui (*Dr. Anderson*). In coll. Ind. Mus., Calcutta.

Family PAPILIONIDÆ.

Subfamily Pierinæ.

Genus Catophaga, Hübner.

Catophaga wardii, n. sp.

Allied to the South Indian and Ceylonese *C. neombo*. Male and female of much larger size.

Male. Upperside olivaceous-white: forewing with a broad black apical band extending from middle of the costa to near the posterior angle, the band traversed by a curved subapical row of five small white spots, the inner border of the band excavated below the costa to below the second upper spot, then bulged inward to the disc in front of the two lower spots, concave below the middle median to lower median, below which the end of the band is imperfect and terminates on the submedian; base of wing broadly grey and sparsely speckled with minute black scales on base of the costa: hindwing with a marginal series of broad black confluent dentate spots, which decrease in width from the costa. Underside: forewing olivaceous-white, apex pale yellow, with a curved black subapical band similar to the inner portion on the upperside: hindwing pale yellow throughout.

Female. Upperside of a darker tint of olivaceous-white than in male: forewing with a broader black apical band, which is traversed by

three subapical white spots, the inner border of the band being less excavated below the costa, the excavated space being shorter and angular on the middle median, more deeply concave beneath it, and the end entirely black to the submedian vein; hindwing with a broader continuous black band, the inner border of which is acutely dentated. Underside: forewing with the basal area tinged with yellow, the discal area olivaceous-white, and the apex glossy olivaceous-white; a broad curved subapical black band corresponding to the inner portion on the upperside: hindwing entirely pale glossy olivaceous-white.

Expanse ♂, ♀ $2\frac{5}{8}$ inches.

Hab. Coonoor, Nilgiris, S. India (*Ward and Lindsay*). In coll. Indian Museum, Calcutta, and F. Moore.

CATOPHAGA ROEPSTORFFII, n. sp.

Male. Upperside white: forewing slightly grey and sparsely black-scaled along base of costal border; a black-speckled spot between upper and middle median veins. Hindwing immaculate. Underside: forewing white, apex very pale yellow; the black-speckled spot as above: hindwing very pale yellow.

Expanse $2\frac{3}{8}$ inches.

Hab. Nicobar Isles. In coll. Indian Museum, Calcutta.

Near to *C. paulina*. Male. Differs from the same sex of that species in the entire absence of the blackish apical margin on the forewing, and in the presence of the discal spot.

Genus IXIAS, Hübner.

IXIAS GANDUCA, n. sp.

Male and female. Upperside deep sulphur-yellow: male: forewing with the apex brownish black traversed by a moderately broad orange-red subapical band, the inner border of the band being very slightly edged with black: hindwing with a very slender black-speckled marginal band.

Female: forewing with a narrower and more irregular-bordered subapical band, which is slightly tinged with orange-yellow, the inner border of the band is broadly black across end of the cell, and from the upper median to the indentation of the lower portion of the band the border consists of a very slender black-speckled line, the lower portion of the band is indented with black, the next upper interspace has a medial black spot, and the third upper interspace is broken by a large black spot: hindwing with a broader dentate-bordered black marginal band. Under-

side of both sexes ochreous-yellow, palest on base of the forewing; both wings with sparsely disposed slender brown strigæ: forewing with a blackish spot at end of the cell, a transverse discal row of purple-brown-speckled spots with white centres: hindwing with a similar white-centred purple-brown-speckled costal spot and row of discal spots, the second and third upper spots being the largest: a brown dot also at end of the cell.

Expanse ♂ 2, ♀ $2\frac{1}{8}$ inches.

Hab. Calcutta (February). In coll. Indian Museum, Calcutta.

Nearest to, but distinct from, *I. moulmeinensis*. The male differs from it above in the comparatively narrower orange-red band and its less black inner border. The female also is quite different from the same sex of that species.

Genus Idmais, Boisd.

Idmais surya, n. sp.

Nearest to *I. oriens*. Male larger, upperside much brighter-coloured, the black apical band broader, and is traversed by three spots only, which are comparatively shorter; the marginal spots are more prominent, the black inner border terminating on the upper median as in *I. oriens*; below the three subapical spots are two black spots. Cell-spot on forewing three times the size of that in *I. oriens* on both the upper and underside: hindwing with six marginal black spots, larger than in *I. oriens*. Underside much brighter-coloured than in *I. oriens*; base of both wings deep yellow, the outer borders broadly suffused with orange-red, the discal macular band similar but much less prominent on the hindwing.

Expanse $1\frac{3}{8}$ inch.

Hab. Sonakhala, Orissa. In coll. Indian Museum, Calcutta.

Genus Mancipium, Hübner.

Mancipium naganum, n. sp.

Male. Upperside pale yellowish-white; forewing with the base of the costal border sparsely black-speckled; a black band at the apex, the inner border of the band being curved, slightly irregular, and terminating at the middle median vein; a small black discal spot between the upper and middle medians, and a slight black-speckled spot at lower end of the cell. Underside: forewing white, with the apex pale yellow, the discal and discocellular spot as on upperside: hindwing yellow.

Expanse 2 inches.

Hab. Naga Hills, Assam. In coll. Indian Museum, Calcutta.

Genus Appias, Hübner.

Appias amboïdes, n. sp.

Male. Upperside white: forewing with a narrow apical black band. Underside: forewing white, the costal border, and apex corresponding to the band on upperside, pale brownish-ochreous: hindwing entirely pale brownish-ochreous, with a slight indistinct dusky fascia extending from the base along the subcostal and median vein.

Expanse 1⅞ inch.

Hab. Silhet. Dihung, Assam. In coll. Indian Museum, Calcutta, and F. Moore.

Genus Hiposcritia, Hübner.

Hiposcritia imbecilis, n. sp.

Male. Upperside white: forewing with a black-speckled apical band, which is traversed by four subapical white spots. Underside: forewing white, with the apex ochreous-white and slightly speckled with ochreous-brown scales: hindwing ochreous-white, sparsely speckled with ochreous-brown scales with slight traces of their clustering on the anterior margin near end of the costal and subcostal veins and across the disc in an indistinct zigzag fascia; a small blackish spot at end of the cell.

Expanse 1¾ to 2 inches.

Hab. Silhet; Assam. In coll. Indian Museum, Calcutta, and F. Moore.

Allied both to *H. indra* and to *H. mahana*. Distinguished from the latter by its smaller size. Forewing with paler and less defined blackish apical band. No subapical curved black fascia on the underside.

Subfamily Papilioninæ.

Genus Papilio, Linn.

Papilio ladakensis, n. sp.

Male. Distinguished from the N. W. Himalayan *P. asiaticus* by the absence of the elongated tail on the hindwing, which in this form is reduced to a short point but little more acute than the anal angle. The forewing is comparatively narrower, and the hindwing is less convex and with less acutely sinuous exterior margin. On the upperside the yellow is also of a paler tint: forewing numerously covered with yellow scales between all the markings, the cell bands are shorter transversely and broader, and the inner cell-band is regularly quadrate; the discal bands

also comparatively narrower and with more slender intervening black veins; the marginal row of spots is broader, and the intervening transverse discal area is narrower: hindwing with the outer border of the yellow basal area excavated between the veins, the marginal spots shorter and somewhat broader, the anal lobe-spot also smaller and broader.

Expanse 3¼ inches.

Hab. Tarhsam, Ladak. In coll. Indian Museum, Calcutta.

Papilio sikkimensis, n. sp.

Differs from N. W. Himalayan and Nepalese specimens of *P. asiaticus* in the very much darker black colour of the upperside; and in the forewing having the yellow cell-bands quadrate in form, the discal band composed of smaller and shorter portions, and the area intervening between the band and the marginal spots broader. On the hindwing, the veins are broadly black-lined, the abdominal border also black and leaving but a small subanal lunule; the discal margin of the yellow area has a more regularly scalloped edge, and there is also a broader discal area intervening between it and the marginal spots; the crimson anal lobe-spot is smaller, narrower, and has a lower retort-like black spot.

Expanse 2⅝ to 3⅜ inches.

Hab. Sikkim (*Elwes*).

Family HESPERIIDÆ.

Cupitha, n. g.

Male. Forewing elongated, triangular, costa arched at the base, exterior margin oblique, posterior margin convex towards the base; first subcostal emitted at nearly one-half before end of the cell, the branches at equal distance apart; cell extending to nearly two-thirds length of the wing; discocellular almost erect, slightly bent close to upper end and below the middle; upper radial from the angle near subcostal, lower radial from the angle below the middle; the middle median at one-sixth, and lower median at four-sixths before end of the cell, submedian undulated; on the underside of the forewing is a short, broad, nacreous patch on the middle of posterior margin, across which the submedian is lined with rough scales, and from near the base of the margin projects a broad pencil of long rigid hairs: hindwing short, costa very much arched from the base, apex rounded; costal vein extending to near apex, forked at its base; subcostal bent upward and slightly joined to costal close to the base, subcostal two-branched, first branch from close to end of the cell; discocellular very slender, slightly oblique and concave; cell extending

to nearly half the wing, of equal width throughout; middle median from near end of the cell, lower at more than one-half before the end, *the portion from the middle median to lower median distorted and extending beneath a drum-like glandular sac, which extends upward in a circular form within the cell from base of lower median*, the sac, or drum, as seen from the upperside, is flat, with a well-defined circular rim, and on the underside, it stands out from the surface in a corrugated circular form; no radial present; submedian straight; internal vein curved.

Thorax stout; antennæ with a slender club.

Type, *C. tympanifera.*

CUPITHA PURREEA.

Pamphila Purreea, Moore, P. Z. S. 1877, p. 564, pl. 58, fig. 10, ♀. Wood-Mason, Journ. Asiat. Soc. Bengal, 1881, p. 261.

HAB. South Andaman.

CUPITHA TYMPANIFERA, n. sp.

Male. Upperside dark violet-brown; forewing with a broad gamboge-yellow basal costal band, and an oblique discal sinuous-bordered band extending upward from near base of the posterior margin to near the apex: hindwing with a broad transverse discal yellow band extending from near the abdominal margin to near the apex and thence upward along the costal border. Cilia yellow. Body brown; abdomen with yellow bands. Underside deep gamboge-yellow: forewing with a short ochreous-brown streak extending longitudinally from the base to end of the cell, and a broad patch at the posterior angle: hindwing with a similarly coloured speckled patch near anal angle ascending upward from end of submedian vein. Palpi and legs yellow, antennæ annulated with yellow.

Expanse ♂ $1\frac{2}{5}$.

HAB. Magaree, Pegu. In coll. F. Moore.

This is a comparatively larger insect than *C. purreea*; the bands on the forewing are broader and with more irregular borders, the bands on the hindwing are also broader.

Genus PLESIONEURA, Felder.

PLESIONEURA MUNDA, n. sp.

Male and female. Upperside olive-brown: forewing with an oblique transverse discal semidiaphanous white band, similar to, but more compact than that in *P. leucocera*, the apex-spot starting from above the costal vein, the two lower large spots, the small one beneath, as well as that outwardly between them, are not separated from each other, the

second lower spot between the median and submedian only being apart from the rest; three subapical conjoined white spots and two minute lower dots; cilia very faintly alternated brownish-white: hindwing uniformly olive-brown: cilia deeply alternated with white. Underside paler than above: forewing marked the same: hindwing numerously speckled with olive-green scales towards abdominal margin; an olive-green-speckled lunule at end of the cell.

Expanse $1\frac{5}{8}$ inch.

Hab. Simla (*Lang*). In coll. F. Moore.

Genus Suastus, Moore.

Suastus aditus, n. sp.

Male. Upperside dark violet-brown: forewing with two small quadrate yellow spots at end of the cell, a larger spot immediately beneath end of the cell between the middle and lower medians, and a small spot between the base of upper and middle medians; between the lower median and submedian is a very slight trace of an opaque yellowish streak; cilia edged with grey. Underside paler brown: forewing with the spots as above, and a whitish discal patch below them: hindwing speckled with olive-grey scales, which are most thickly disposed along the abdominal border and form a distinct line along the submedian vein; two dark brown discal spots, one being situated between the middle and lower medians, the other between the latter and submedian. Body, palpi, and legs beneath olivaceous-grey.

Expanse $1\frac{3}{10}$ inch.

Hab. Andaman Isles. In coll. Indian Museum, Calcutta.

Allied to *S. sala* (*Hesperia sala*, Hewits.).

Suastus möllerii, n. sp.

Male. Upperside very dark olive-brown: forewing with three small narrow white semidiaphanous subapical spots, a larger narrow spot at lower end of the cell, a still larger spot below end of the cell, and a small very slender spot between base of upper and middle medians; a small yellowish opaque spot also above middle of the submedian: hindwing with the abdominal border broadly paler olive-brown. Cilia cinereous-white. Underside: forewing dusky-black, the costal border and apical area pale olive-brown; spotted as above: hindwing very pale olive-brown, with the interspace between submedian and internal veins white. Palpi beneath, and legs, and abdomen beneath, white.

Expanse $1\frac{1}{2}$ inch.

Hab. Sikkim (*Otto Möller*). In coll. Indian Museum, Calcutta.

Genus Satarupa, Moore.

Satarupa phisara n. sp.

Male. Upperside dark vinous-brown: forewing with two, sometimes three or four, minute semidiaphanous yellowish white subapical spots, a small spot at lower end of the cell, a large quadrate spot below end of the cell, and a small spot also between the base of upper and middle medians; a very indistinct greyish-brown-speckled submarginal lunular fascia and a similar short fascia below the quadrate discal spot: hindwing with a transverse subbasal pale yellowish band, and a curved submarginal indistinct greyish-brown-speckled lunular fascia, which gives the discal area a macular appearance. Female: forewing marked as in male, the short fascia below the discal spot more distinct: hindwing with the transverse band somewhat broader, the discal area between it and the submarginal lunular fascia more distinctly macular, being traversed by pale veins. Underside as above, the markings more prominent. Abdomen with slender white narrow bands; front of head and base of palpi, and pectus, orange-yellow, tip of palpi black.

Expanse ♂ $1\frac{5}{10}$, ♀ $1\frac{6}{10}$ inch.

Hab. Khasia Hills. In coll. Indian Museum, Calcutta, and F. Moore.

Allied to *S. bhagava* and to *S. sambara*.

Satarupa narada, n. sp.

Upperside purpurascent violet-brown: forewing with three small upper and two lower subapical semidiaphanous white spots, a small erect oval spot at lower end of the cell, a slightly larger quadrate spot on the disc between upper and middle medians, and a broad band formed of three quadrate spots increasing in width from end of cell to posterior margin: hindwing with a broad white transverse medial band, the outer border with an ill-defined upper spot. Cilia edged with white. Underside marked as above; the hindwing with the band showing a more defined macular outer border and a well separated upper spot.
Expanse $1\frac{4}{10}$ inch.

Hab. Darjiling, Sikkim. In coll. Indian Museum, Calcutta, and F. Moore.

Nearest allied to *S. bhagava*, but quite distinct.

Genus Tagiades, Hübner.

Tagiades khasiana, n. sp.

Male. Nearest to *T. ravi*. Of larger size: forewing comparatively more pointed at the apex: hindwing also broader, and with a more angular apex. Upperside of a paler olivaceous-brown, the dusky markings less distinct on both wings, the apical and discal spots smaller. Female upperside also paler than in *T. ravi*, the apical spots on forewing somewhat smaller, the cell spots similar, the two discal spots somewhat larger.

Underside: forewing with the spots as above: hindwing more intensely whitish grey, the discal black spots much smaller and less defined.

Expanse ♂ 2, ♀ $2\frac{1}{10}$ inches.

Hab. Khasia Hills; Shillong; Assam. In coll. Indian Museum, Calcutta, and F. Moore.

Lobocla, n. g.

Male. Forewing triangular, the edge of the costal margin slightly folded over on to the upperside from near the base to end of the costal vein;* the costal vein extending to three-fifths the margin; subcostal five-branched, first branch emitted at one-third before end of cell, second and third at equal distances from the first, fourth and fifth from end of the cell: discocellular bent outward near upper end and inwardly oblique hindward; upper radial from the angle near subcostal, lower radial from the middle; cell long, extending beyond two-thirds the wing; three medians, lower at three-fourths and middle median at about one-fourth before end of the cell; submedian straight: hindwing short, broad, apex rounded, exterior margin slightly produced and angular at end of submedian vein; costal vein extending to the apex; subcostal touching the costal close to the base, two-branched, first branch at one-fourth before end of the cell; discocellular very slender, almost erect; the radial from its middle; cell broad, extending to half the wing; two upper medians from end of the cell, lower at about one-third before the end; submedian and internal vein nearly straight. Body short, stout, thorax hairy; palpi broad, thickly clothed, apical joint short, thick; antennæ with a long slender-pointed tip; femora and tibiæ short, stout, slightly pilose, middle tibiæ with two and hind with four spurs, tarsi long.

Type, *L. liliana*.

* The species of *Erynnis* (*E. alceæ*, etc.) have a similar fold on the costal margin of the forewing.

LOBOCLA LILIANA.

Plesioneura liliana, Atkinson, P. Z. S. 1871, p. 216, pl. xxii, fig. 2.

HAB. Yunan.

LOBOCLA CASYAPA, n. sp.

Differs from *L. liliana* in its smaller size. Upperside somewhat paler and of an olive-brown tint, sparsely speckled with olive-grey scales: forewing with the transverse semidiaphanous yellow band one-third less in width, the portions being distinctly defined by the traversing brown veins, the subapical spots also much smaller. Underside much paler: forewing numerously speckled with greyish-ochreous scales at the apex, the band and apical spots as above: hindwing with similarly disposed markings, but all composed of more numerous greyish-ochreous scales, these scales being whitish in *L. liliana*.

Expanse $1\frac{8}{10}$ inch.

HAB. Masuri (*Lang*). Cashmere (*Reed*). In coll. Indian Museum, Calcutta, and F. Moore.

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III.—*Account of the South-West Monsoon Storms of the 26th June to 4th July and of 10th to 15th November 1883.*—By JOHN ELIOT, M. A., *Meteorological Reporter to the Government of Bengal.*

[Received June 4th ;—Read July 2nd, 1884.]

(With Plates II—X.)

CHAPTER I.

INTRODUCTION.

It is proposed in the following paper to give an account of the two most important and remarkable storms that occurred in the Bay of Bengal during the year 1883. The first storm was generated during the last week of June near the Head of the Bay and gave very stormy weather off the Bengal and Orissa coasts, and was the only occasion on which it was necessary to hoist the storm signals at the Saugor Island station near the entrance to the Hooghly. The second storm was formed in the Gulf of Martaban during the second week of November, almost at the end of the south-west monsoon, and pursued a very unusual course. It crossed into the Bay of Bengal through the channel between Cape Negrais and the Andaman Islands. It then slightly recurved and moved in a general northward direction, approaching the Arracan coast near Akyab, where it was broken up by the action of the Arracan Hills.

The following is a list of all the cyclonic storms in the Bay of Bengal during the south-west monsoon period of the year 1883. They were all of comparatively small extent and intensity, or ordinary south-west monsoon storms accompanied with winds of force 8 to 10 at and near the centre.

1. Storm of June 13th to 20th at the commencement of the south-west monsoon, which gave the first heavy burst of rainfall to Behar. It formed near the Balasore coast on the 13th, and advanced into Behar, where it broke up on the 20th.

2. Storm of June 26th to 4th July. This was generated slowly near the Sandheads on the 26th and 27th, was of considerable intensity, and remained nearly stationary until the 29th. It crossed the Balasore coast early on the morning of the 30th.

3. Storm of July 6th to 8th. This was formed at or near the Sandheads under similar conditions to the preceding, but was of small intensity. It crossed the Balasore coast on the afternoon of the 7th.

4. Storm of the 12th to 14th July. This began to form on the morning of the 12th off the South Orissa coast, across which (between False Point and Gopalpore) the centre advanced on the evening of the 13th, or early on the morning of the 14th, into the Central Provinces. It was of slight intensity.

5. Storm of the 16th to 18th August. This was formed in the north-west angle of the Bay, and crossed the North Orissa coast near Balasore. This storm was very small, of very slight intensity, and of no importance.

6. Storm of the 23rd to the 26th of August. This was generated further to the south than the preceding storm, and crossed the Ganjam coast between Gopalpore and Vizagapatam on the evening of the 25th. It was of slight intensity.

7. Storm of the 30th August to the 3rd of September. This depression crossed the coast near Balasore on the afternoon of the 2nd of September, and was of moderate intensity.

8. Storm of the 6th and 7th of September. This was formed immediately after the preceding, and followed along nearly the same track, crossing the Orissa coast to the south of Balasore on the morning of the 7th. It was of small intensity.

9. Storm of the 11th to the 15th of November. This was generated in the Martaban Gulf, and advanced in a north-westerly direction as far as Lat. 16° N. Long. 93° E. to the west of Diamond Island, when it recurved and moved northwards parallel to the coast, breaking up in the neighbourhood of Akyab during the afternoon of the 14th. This was the most severe and intense storm of the year in the Bay, but was

of very limited extent, and hence did not affect the weather in the north-west angle of the Bay.

10. Storm of the 2nd to the 4th of December, which gave heavy rain at a very unusual time of the year to Bengal.

Two of these were remarkable for the length of time that elapsed before they broke up after they had crossed the Bengal or Orissa coast, and also for the very heavy rainfall and floods which accompanied their existence on land. The first of these was the storm of June 13th to 20th which was formed in the immediate neighbourhood of the Balasore coast. It drifted through Chutia Nagpur and South Behar into North Behar and gave excessively heavy rain to a narrow area in Behar stretching from Gya to Motihari and Durbhunga. This storm was of little importance at sea.

The second storm of the series was similar in its general character. It was generated near the Head of the Bay, crossed the North Orissa coast, and advanced over the Orissa Hills into the Central Provinces. Instead of breaking up as do three out of four storms or cyclonic circulations which pass from the Bay into the Central Provinces, it acquired fresh energy and drew large supplies of vapour from the Bombay monsoon current. It advanced across the head of the Peninsula almost parallel to the valleys of the Nerbudda and Tapti. The heavy rain accompanying it caused excessive floods in these two rivers which inflicted much damage on the town of Surat, and others in the lower portion of the valleys of these two rivers. This cyclonic circulation apparently broke up in the Arabian Sea in the immediate neighbourhood of the Guzerat and Sind coasts.

The meteorology of India for the year 1883 was remarkable in several respects. One or two of the more important features had a direct bearing on the number and character of the cyclones.

During the cold weather months several storms of unusual character and magnitude passed over Northern India and the Himalayas from west to east. They gave excessive snowfall over the higher Himalayas and affected the weather certainly for many weeks and probably more or less permanently for the year. The accumulation of snow reduced temperature for some time and gave a strong northerly element to the air motion or wind circulation over Northern India. The south-west monsoon set in about the normal period on the Burmah and Bengal coasts, but it never obtained its usual hold in Northern India. The rains were irregular in occurrence and distribution, and much below the average over the whole of Northern India. The deficiency was quite as marked in North Bengal as in North Behar or Rohilkhand or in the Western districts of the Punjab. The monsoon was in ordinary language very weak, and

its weakness was more especially shown in Bengal by the early and complete termination of the rains in the last week of September.

The only theory which on the whole explains the phenomena of cyclonic generation and motion, *viz.*, the condensation theory, indicates that small cyclonic storms should be of frequent occurrence during the south-west monsoon, and that they should be most frequent when the monsoon is weak on land, or in other words, when the rainfall occurs to a smaller extent over the land and therefore usually to a greater extent over the sea area in the neighbourhood of the land. The rainfall in the Bay near the Burmah, Arracan, and Bengal coasts during the south-west monsoon of 1883 was, according to the various accounts received in the Meteorological Office, noticeably larger in amount than usual. The large number of cyclonic storms which formed during the period the south-west monsoon prevailed in Northern India in the year 1883 confirms this inference from theory.

After the south-west monsoon current finally retreated from Northern India in the last week of September, it recurved as usual over the Bay. The moisture brought up by it was, however, at once discharged on the Madras coast districts. The condensation theory indicates that there is a marked tendency during the transition period of October and November to the commencement and continuance of heavy rainfall over the centre of the Bay, and therefore to the generation of severe cyclonic storms at that period. If, however, the aqueous vapour or moisture is not discharged as rain over the Bay, but is carried westwards by the north-east monsoon winds and deposited on and near the Madras coast, the conditions for the formation of a cyclonic storm are not present in the Bay. In other words, if heavy general rain sets in and continues over the Madras coast at the change of this monsoon, the Bay will be free from severe and extensive storms. This rule was strikingly illustrated by the weather of the Bay and the Madras coast in October and November 1883.

The paper will deal with the subject under the following heads :—

1. History of the Storm of June 26th to July 4th.
2. Discussion of the more important features of the Storm of 26th June to 4th July.
3. History of the Storm of 10th to 15th November.
4. Discussion of the more important features and peculiarities of the Storm of 10th to 15th November.
5. General remarks on the generation of cyclones.

CHAPTER II.

History of the Storm of June 26th to July 4th.

The south-west monsoon set in slightly earlier than usual on the Bengal coast in 1883, but with no great strength. Moderate rain fell over the whole of the Province of Bengal during the first fortnight. On the 12th there began to form, in the north-west angle of the Bay, between False-point and Saugor Island, and over the adjacent portion of south-west Bengal, a small barometric depression; and on the morning of the 13th, the winds in South-west Bengal and North Orissa indicated cyclonic convergence to it. The depression intensified on the 14th, and its centre was then to the north of and in the neighbourhood of Balasore. It advanced northwards through Chutia Nagpore and South Behar across the Ganges into the central districts of North Behar, and gave excessive rain over a narrow area stretching from Gya through Behar and Patna to Mozufferpore and Durbhunga. Amongst the remarkable rainfalls were the following :—

	15th	16th	17th	18th	19th
Gya	1·01	9·04	0·21	0·01	nil.
Behar	5·17	6·05	10·95	0·58	0·09
Patna	1·23	6·35	5·13	nil.	0·05
Mozufferpore	0·08	2·85	12·49	0·42	nil.
Hajipur	0·86	4·51	9·39	nil.	0·14
Durbhunga	0·53	1·02	5·02	8·52	0·24

The disturbance broke up in North Behar and finally disappeared on the 20th. During the next five days there was a partial break in the rains. The air was drier, sky less clouded, and rain showers local rather than general in character. The winds more especially diminished in strength, but continued to indicate the same general atmospheric motion over the Gangetic delta and valley as before. Southerly winds blew across the Bengal coast. In Northern Bengal and Behar the current was deflected up the Gangetic valley and hence gave winds blowing from directions varying generally between N. E. and S. E. In Chutia Nagpore and in Western Orissa the effects of the Bombay branch of the monsoon current were beginning to be shown by the prevalence of moist S. S. W. winds at Hazarabagh and of W. N. W.

winds at Cuttack. The Bombay branch of the monsoon current, it may be added, was late in being established on the Bombay coast, and was very feeble before the 20th of the month, when it rapidly increased in force, as measured by the strength of the winds.

The heavy rainfall attending the disturbance of the third week of the month had drained the southerly monsoon winds advancing into Bengal from the Bay of a very large portion of their moisture, and weakened them for some days. This is shown by the diminution in the amount of the rainfall and by the decreased velocity of the winds in Bengal.

The following table gives the average amount of the rainfall day by day between the 13th and the 26th in the various divisions in Bengal, and illustrates fully the general diminution in the rainfall of every part of the Province after the 20th :—

Table of Average Rainfall recorded in Bengal, June 13th to 26th 1883.

Province.	No. of Stations.	13th.	14th.	15th.	16th.	17th.	18th.	19th.	20th.	21st.	22nd.	23rd.	24th.	25th.	26th.
Orissa.....	16	0·64	1·30	0·23	0·04	0·25	0·16	0·30	0·09	Nil.	0·37	0·10	0·43	0·10	0·41
S. W. Bengal	46	0·31	0·78	0·42	0·26	0·27	0·26	1·02	0·31	0·66	0·26	0·45	0·10	0·18	0·07
East Bengal	26	0·18	0·51	1·62	1·11	0·86	1·00	1·48	0·46	0·82	0·33	0·17	0·18	0·16	0·11
North Bengal	27	0·09	0·21	0·91	1·79	1·71	0·47	1·23	2·25	0·97	0·33	0·72	1·09	0·98	0·96
North Behar	16	0·04	0·12	0·52	1·86	3·69	1·36	1·13	1·21	0·42	0·42	0·30	0·07	1·98	0·89
South Behar	17	0·29	0·08	1·40	3·37	1·99	0·92	0·35	0·11	0·04	0·09	0·38	Nil.	0·38	0·77
Chutia Nagpore & Sonthal Perg.	16	0·39	0·50	2·04	0·48	0·21	0·56	0·63	0·97	0·15	0·37	0·13	Nil.	0·19	0·35

The following table gives the daily amounts of wind for the same period at the chief Meteorological Stations in Orissa, Bengal, and Behar.

Table of Daily Amount of Wind at eight Stations in Bengal. June 13th to 25th, 1883.

	13th.	14th.	15th.	16th.	17th.	18th.	19th.	20th.	21st.	22nd.	23rd.	24th.	25th.	Average Daily Amount, June.
False Point ...	261	207	326	258	265	207	270	241	245	244	?	285	238	249
Calcutta	127	141	166	215	177	140	167	178	166	151	122	72	104	162
Dacca	102	174	164	174	177	160	193	229	217	211	181	142	155	186
Dinagepore ...	144	168	312	264	216	144	192	216	144	120	120	144	120	?
Purneah	76	100	170	111	126	114	255	158	24	26	21	47	29	98
Durbhunga ...	137	185	279	148	278	153	58	74	127	57	59	116	134	137
Patna	117	148	206	251	114	58	60	121	138	55	111	107	127	?
Hazaribagh ...	99	134	191	286	329	182	206	153	239	136	211	182	178	214

The rainfall table shews a very marked diminution in the amount of rain after the 20th. An examination of the complete rainfall returns of the Province of Bengal indicates that it occurred as isolated and local showers, which were occasionally heavy and gave large amounts at single stations. No general rain, however, fell over any considerable portion of the Province between the 20th and 25th. Similarly, an examination of the second table giving wind amounts indicates that, although strong winds generally prevailed between the 13th and 20th, winds were unusually light after the 20th and below their normal strength. This feature of weakness of its air motion was most markedly shown by the stations most distant from the sea, as, for example, Purneah.

The meteorological observations taken in Bengal thus show that what may be termed a strong monsoon prevailed at the Head of the Bay and in Bengal from the 1st to the 20th of the month, and that for some days afterwards, or between the 20th and the 25th, it was much feebler. Also, as will be seen from the following observations and from the history of the storm, the south-west monsoon winds increased in force to the west of the Andamans on the 23rd, advanced northwards as a strong atmospheric current along the coasts of Burmah and Arracan, and fed the cyclonic vortex which formed on the 26th and 27th with large supplies of aqueous vapour.

Table of Daily Amount of Wind at seven Stations to the east of the Bay. July 22nd to 28th, 1883.

	Average June.	22nd.	23rd.	24th.	25th.	26th.	27th.	28th.
Nancowry	263·5	115·0	98·8	97·3	124·2	252·7	354·5	289·8
Port Blair	257·6	128·7	212·9	386·0	283·8	305·4	315·6	323·0
Diamond Island.....	203·0	122·9	118·5	118·7	240·7	310·4	346·6	336·5
Akyab	93·6	42·7	48·9	55·4	83·6	100·9	153·8	234·4
Chittagong	168·3	162·6	113·5	72·9	71·9	50·1	117·7	212·2
Saugor Island	332·4	362·7	312·4	284·7	235·2	144·5	137·1	357·4
Dacca	183·7	211·1	181·1	142·8	155·0	68·8	66·8	181·1

The preceding table shows that on the 22nd and 23rd the winds were barely half their normal strength over the east of the Bay. A rapid increase took place on the 24th at Port Blair, which extended to Diamond Island on the 25th and to Akyab and Chittagong on the 26th and 27th.

These figures suggest what is also indicated by the whole of the Bengal observations, *viz.*, that the weather in the Bay between the 20th and 23rd of June was that which usually accompanies the commencement of a partial break in the rains in Bengal or Northern India. Winds were light and unsteady over the whole of the north and centre of the Bay. The logs of vessels show that occasional rain-squalls local in character occurred, more especially in the south of the Bay. The observations at Port Blair, Nancowry, Diamond Island, and Akyab and of the ships traversing the Bay at the time, however, prove conclusively that south-westerly winds prevailed over the whole of the Bay; and the Bengal observations establish that they were continued in Bengal and Behar as southerly and easterly winds. They also indicate that on the 24th a change occurred in the character of the winds to the west of the Andamans which lasted for some days. A very considerable increase occurred in the south-west winds of that part of the Bay which rapidly and steadily extended northwards.

Hence prior to the morning of the 25th the gradients were normal in direction, although smaller in amount than the average for the season, over the Bay; the winds blew from the usual quarter and gave rise to the normal atmospheric current up the Gangetic valley. The only indication afforded at this time by the land observations of the subsequent stormy weather was the occurrence of a partial break in the rains, which, as has been ascertained by previous experience, establishes conditions which are favourable to the development of a cyclonic disturbance if an adequate motive power or disturbance act on the atmosphere.

The account of the storm of the last week of June hence begins with the 25th of June, the day before which there were any indications of the actual formation of an atmospheric whirl at the Head of the Bay.

25th of June.—The atmosphere was in a slightly disturbed state over nearly the whole of India. The barometer was rising in the North-Western Provinces, Bengal, and the south of the Peninsula, but elsewhere it was falling. A large depression accompanying the establishment of the south-west monsoon in Western India was advancing along the west coast of India and causing the barometer to fall quickly. Winds had backed to south-east on the 24th at Bombay. On the 25th, winds were southerly along the Bombay coast and easterly in Cutch. There were strong indications that gales of considerable force were blowing on and near the Bombay coast. The weather was cloudy everywhere, except in the Punjab; and rain in small or moderate amounts was falling in every part of India, except the Punjab, Behar, Sind, and parts of the Madras Presidency. The rainfall was very small in amount and local in its distribution over the North-Western Provinces, Bengal, Rajputana, and the North Bombay districts.

The following table gives the more important observations taken at the Coast Stations on the Bay of Bengal on the 25th June, 1883:—

Stations.	10 A. M. Barometer reduced to sea level.	Change since 10 A. M. 24th.	Wind direction.		Wind velocity of previous 24 hours miles per hour.	Percentage of wind amount to average.	Cloud 10 A. M.	Rainfall of previous 24 hours.
			10 h.	16 h.				
Nancowry.....	29·941	+ ·047	S. S. W.	S. S. W.	5	45	8	0·14
Port Blair.....	29·911	+ ·069	S. W.	S. W.	14	127	10	1·05
Diamond Island	29·847	+ ·024	S. W.	W. S. W.	8	100	9	0·24
Akyab	29·792	+ ·019	E. S. E.	S.	4	100	9	1·35
Chittagong ...	29·802	+ ·027	S. E.	S. W.	3	43	10	0·15
Dacca	29·752	+ ·024	S.	S. E.	7	88	10	...
Jessore	29·745	+ ·040	calm.	S. S. W.	7	140	8	...
Calcutta (Alipore)	29·719	+ ·025	S.	S. S. W.	5	83	9	0·05
Saugor Island	29·775	+ ·053	S.	S. S. E.	31	221	3	0·21
Balasore	29·715	+ ·010	S. W.	?	5	?	3	...

Stations.	10 A. M. Barometer reduced to sea level.	Change since 10 A. M. 24th.	Wind direction.		Wind velocity of previous 24 hours miles per hour.	Percentage of wind amount to average.	Cloud 10 A. M.	Rainfall of previous 24 hours.
			10 h.	16 h.				
Cuttack.....	29·695	+ ·015	W. S. W.	S.	3	75	9	1·01
False Point ...	29·722	+ ·005	Calm.	E.	11	110	8	0·03
Vizagapatam	29·672	— ·027	W.	W. by S.	6	150	8	...

Pressure had increased rather rapidly over the province of Bengal during the previous 24 hours. The general result of the changes of pressure since the dispersion of the disturbance of the third week of the month had been to give a high barometer, which culminated on the morning of the 25th in excessively high readings. The barometric readings at 10 A. M. of that day in Bengal were above the average by amounts which varied from ·19″ at Saugor Island to ·09″ at Durbhunga. Winds were, however, generally normal in direction, blowing from south in South-West Bengal, south-east in East Bengal, east in North and Central Behar, and south-west in Chutia Nagpore.

The unusual weakness of the wind is shown by the following comparison table:—

	Wind amount of 24 hours preceding 10 A. M.	Average daily wind amount June.	Percentage of actual to average wind amount.
Saugor Island	256·9	332·4	77·3
Calcutta.....	104·0	152·3	68·3
Berhampore	132·6	132·3	100·2
Dacca.....	162·1	183·7	88·3
Jessore	118·3	118·3	100·0
Chittagong	71·5	168·3	42·5
Burdwan	110·7	124·2	89·1
Cuttack	40·0	96·3	41·5
False Point	263·3	247·2	106·5

The average rainfall in each of the seven meteorological divisions of Bengal for the 24 hours preceding 6 P. M. of the 25th June is given in page 58.

The following table gives the meteorological information for the 25th extracted from the logs of vessels:—

Vessel.	Hour.	Latitude.	Longitude.	Probable reduced barometer.	Wind. Dir.	Wind. Force.	Remarks.
Bancoora	4 A. M.			29·899	S. S. W.	3	8 A. M. Light breeze and hazy.
	8 A. M.			30·988	N. E.	2	11 A. M. Heavy rain squall.
	Noon	N. 5° 58′ by D. R.	E. 80° 58′	·963	W.S.W.	3	Noon. Moderate breeze and fine.
	4 P. M.			29·889	S. W.	3	
	8 P. M.			·901	S. W.	3	
	Midnt.			·889	S. W.	3	Midnight. Moderate breeze and clear.
India	4 A. M.				S.	4	Moderate breeze with passing squalls.
	8 A. M.			29·750	N. W.	3	Breeze moderating and fine.
	Noon	N. 15° 10′	E. 83° 14′	·730	W.	3	Moderate breeze and fine.
	4 P. M.				W.		Moderate fresh wind; cloudy with showers.
	8 P. M.			·730	W.	4	Fresh breeze and overcast.
	Midnt.			·730	W.	3	Threatening to N.W. with lightning.
Himalaya	4 A. M.			29·712	S. S. W.		
	8 A. M.	N.	E.	·747	W. S. W.		
	Noon.	15° 13′	82° 29′	·737	S. W.	3	Moderate breeze and overcast.
	4 P. M.			·731	W. S. W.		
	8 P. M.			·734	S. W.		
	Midnt.			·757	S. W.		
Roma	4 A. M.				S. W.	5	Fresh breeze and moderate sea.
	8 A. M.	N.	E.		...	...	
	Noon	17° 15′	85° 17′		...	0 to 3	Moderate variable wind with very heavy rain squalls and dark overcast sky.
	4 P. M.				...	4	Rain squalls.
	8 P. M.				...	...	Lightning, similar weather and high S. S. W. sea.
	Midnt.				...	...	Overcast sky.

Vessel.	Hour.	Latitude.	Longitude.	Probable reduced barometer.	Wind. Dir.	Wind. Force.	Remarks.
Saint Magnus	4 A. M.			29·690	W. S. W.	4	
	8 A. M.	N.	E.	·700	S. W.	4	
	Noon	18° 31′	86° 29′	·710	W.	1	
	4 P. M.			·680	S.	1	Calms and rain.
	8 P. M.			·710	S. W.	5	Cloudy, lightning to S. W. & S. E.
Star of Albion	4 A. M.			29·730			
	8 A. M.	N.	E.	·740			Easterly current. Squally.
	Noon	18° 46′	86° 40′	·740	W.	4to5	Cloudy weather.
	4 P. M.			·710			
	8 P. M.			·720			
Scottish Chieftain	8 A. M.			29·680		0	Very light airs and dark cloudy weather.
		N.	E.				
	Noon	18° 58′	86° 34′	·690	S. by W.	1	
	4 P. M.				S. W.	2	Strong westerly current.
	8 P. M.			·660	N. N. W.	3	
British Princess	4 A. M.				S. by W.	5	Cloudy sky and S. W. swell.
	8 A. M.				S. W.	4	Variable winds.
		N.	E.				
	Noon	19° 9	85° 15′	29·700	E.	2	Fine clear weather.
	4 P. M.				E. S. E.	4	Squally with rain.
	8 P. M.				S.	3	Cloudy sky.
	Midnt.				W. S. W.	4	S. W. swell moderating.
					S. S. E.		Midnight.
Prince Amadeo	4 A. M.				S. W.	4	A. M. Weather clearing, wind moderate. 4 A.M. Gentle wind, fine weather. Noon. Close sultry weather. Sea smooth.
		N.	E.				
	Noon	19° 23′	85° 56′	29·700	S.	4	
	4 P. M.				E. S. E.	3	4 P. M. Weather fine Sea very smooth.
Commilla	8 A. M.				Variable	2	Showery.
		N.	E.				
	Noon	20° 13′	92° 28		S. E.	3	Clear weather and smooth sea.
	4 P. M.			29·611	S. S. E.	3	Fine weather.
	8 P. M.			·683	S. E.	4	Fine weather and lightning to eastward.
	Midnt.			·671	E. S. E.	4	Clear weather and smooth sea.

The logs of the vessels received in the Meteorological office give an imperfect view of the weather in the Bay, as they were chiefly those of steamers passing up to Calcutta along the west coast of the Bay.

The Bancoora rounding Ceylon had light to moderate south-west breezes (force 1 to 3) during the day. The India and Himalaya were a few miles apart off the coast to the south-east of Coconada. The former was in Lat. 15° 10′ N. and Long. 83° 14′ E. at noon and the latter in Lat. 15° 13′ N. and Long. 82° 29′ E. Both had moderate breezes and overcast skies. The winds were of force 3 and from directions between W. and S. W. The Roma, in Lat. 17° 15′ N. and Long. 85° 17′ E. at noon, had moderate variable winds with calms and very heavy rain squalls. The Star of Albion, Scottish Chieftain, and Saint Magnus were all near each other off the Gopalpore coast. The winds were very light and unsteady, but were generally from directions between west and south-west. The Scottish Chieftain had calms at 8 A. M., and the Saint Magnus calms and rain at 4 P. M. The British Princess and Prince Amadeo were a little further to the north. The former, in Lat. 19° 9′ N. and Long. 85° 15′ E. at noon, had variable winds during the day varying in force between 2 and 5. The latter, in Lat. 19° 23′ N. and Long. 86° 56′ E., had gentle south-west winds, sultry weather, and a smooth sea. There were hence no indications on this day of the existence of an atmospheric whirl in the Bay.

26th June.—During the previous 24 hours the barometer had risen rapidly at the Bombay stations, and the depression off that coast was much less marked than on the 25th at Bombay and the adjacent coast stations. South-westerly gales were blowing, but the rainfall brought up by them was as yet moderate in amount. In parts of Southern and Central India the barometer had also risen, but over the whole of Northern India a considerable fall had taken place. Along the foot of the hills, from Assam to the Punjab, the wind was generally easterly or north-easterly, and in the Central Provinces and Central India it was westerly. The weather was dull and sky overcast over the whole country except the Punjab, and rain was falling except in North-Western and Central India, but the amounts registered were in the great majority of cases small. The rainfall returns, as compared with the average rainfall between June 1st and 26th, shew that there was a deficiency of from 1 to 3 inches over the plains of the Punjab, the western half of the North-Western Provinces, Central India, and Rajputana, and of 7 inches in Bombay.

The following are the more important observations taken at 10 A. M. of the 26th at the selected stations near the Head of the Bay :—

Stations.	10 A. M. Barometer reduced to sea level.	Change since 10 A. M. 25th.	Wind. 10 h.	Wind. 16 h.	Average wind velocity of previous 24 hours.	Wind percentage	Cloud 10 A. M.	Rainfall of previous 24 hours.
Nancowry	29·915	—·026	S. W.	S. W.	11	100	7	...
Port Blair	29·886	—·025	S. W.	S. W.	11	100	10	0·32
Diamond Island...	29·801	—·046	S.	S. W.	10	125	8	1·26
Akyab.....	29·711	—·081	S. E.	S. S. E.	4	100	9	1·98
Chittagong.....	29·660	—·142	S. E.	E.	2	29	5	0·01
Dacca	29·682	—·070	S.	S. E.	6	75	9	1·67
Jessore	29·673	—·072	S.	S.	6	120	10	0·04
Calcutta (Alipore)	29·646	—·073	E. S. E.	E. by S.	3	50	8	0·71
Saugor Island ...	29·647	—·128	S. E.	E. S. E.	7	50	2	0·08
Balasore	29·636	—·079	N. N. E.	?	2	?	6	...
Cuttack	29·626	—·069	S. S. W.	Calm.	1	25	9	0·12
False Point.	29·621	—·101	N. E.	E.	8	80	4	...
Vizagapatam	29·668	—·004	W.	W·	5	125	6	0·10

Pressure, it will be seen from the above, had given way, and the fall was greatest at Saugor Island and Chittagong. This was due, as shewn by the wind directions, to the formation of an area of cyclonic disturbance and barometric depression near the Head of the Bay. The winds at Saugor Island had shifted to south-east, at False Point to north-east, and at Gopalpore to north-west. From the information extracted from the logs, it will be seen that light north-east winds were established over a considerable portion of the north-west of the Bay. Hence, the cyclonic circulation was just beginning to affect the direction of air motion at Saugor Island and was causing it to back. It was, however, not yet participating directly in the cyclonic indraught. The sky was more or less clouded in all parts of the province of Bengal, the air very damp (especially in Behar, after the floods of the previous week), and winds unusually light and somewhat unsteady.

The following table gives the average rainfall in the seven divisions of the province of Bengal for the 24 hours preceding 6 P. M.:—

Table of Average Rainfall in Bengal on the 26th June 1883.

Name of Province.	Average Rain.
Orissa	0·41
South West Bengal.....	0.07
East Bengal	0·11
North Bengal	0·96
North Behar.....	0·89
South Behar.....	0·77
Sonthal Pergannahs and ..... Chutia Nagpore	0·35

The following extracts from the logs of vessels give information respecting the Bay on the 26th :—

Vessel.	Hour.	Latitude.	Longitude.	Probable reduced barometer.	Wind. Dir.	Wind. Force.	Remarks.
Bancoora	4 A. M.			29·876	SW. by S.	2	4 A. M. Light breeze and fine.
	8 A. M.			·883	SW. by S.	2	8 A. M. Light following wind and clear.
		N.	E.				
	Noon	8° 35′	82° 35′	·863	S.W. by S.	2	
	4 P. M.			·780	W S. W.	2	
	8 P. M.			·856	S. S. W.	2	
	Midnt.			·816	S. S. W.	3	Evening. Moderate breeze and fine.
		N.	E.				
Pemba ...	Noon	16° 46′	96° 12′				10 A. M. At Rangoon.
	4 P. M.				S. W.	5	Unmoored and proceeded towards Calcutta.
	Midnt.			29·750	...	5	Midnight. Fresh to moderate breezes and frequent rain squalls.
Himalaya	4 A. M.			29·657	W.		
	8 A. M.			·635	W.		
		N.	E.				
	Noon	17° 32′	84° 38′	·615	W.		Moderate breeze and overcast.
	4 P. M.			·506	S. W.		
	8 P. M.			·586	W. S. W.		Moderate breeze and fine.
	Midnt.			·539	W. S W.		
	8 A. M.	N.	E.	29·700			
Star of Albion	Noon	19° 21′	86° 20′	·630	W. to SW & N. W	4to2	Principally light unsteady winds, finer at night than in the day time.
	4 P. M.			·620			

Vessel.	Hour.	Latitude.	Longitude.	Probable reduced barometer.	Wind.		Remarks.
					Dir.	Force.	
British Princess	4 A. M.				W. S. W.	4	Dark cloudy sky.
	8 A. M.				W. N. W.	3	Light green sky.
		N.	E.				
	Noon	19° 30′	87° 3′	29·600	N. N. E.	4	Weather fine and clear with S. W. swell.
	4 P. M.				E. N. E.	3	
	8 P. M.				E.	0 to 3	High southerly swell and cloudy, the stars showing through with great brilliancy.
	Midnt.				W. N. W.	5	
India	4 A. M.				W.	4	Strong winds & squally with clouds.
	8 A. M.			29·610	N. by E.	3	Moderating breezes and cloudy weather.
		N.	E.				
	Noon	19° 36′	86° 33′	·630	...	3	Moderate breeze and cloudy.
	4 P. M.			·630	N. E.		Moderate breeze, fine.
	8 P. M.			·590	Calm.		Calm and clear.
	Midnt.			·580	N. E.	3	Moderate breeze with passing clouds.
Saint Magnus	4 A. M.			29·610	W.	4	Cloudy weather.
	8 A. M.	N.	E.	·610	N.	2	
	Noon	19° 47′	87° 18′	·600	N. E.	1	Faint airs and calms.
	4 P. M.			·530	E.	1	Faint airs, calms, heavy southerly sea.
	8 P. M.			·590	N. W.	1	Cloudy with lightning.
	Midnt.			·550	N. W.	5	Cloudy.
Prince Amadeo	4 A. M.				N.	Light.	4 A. M. Heavy cloudy and unsettled looking weather. Much lightning and southerly swell. Noon, similar looking weather, light variable airs; unsettled looking all round, high southerly swell.
		N.	E.				
	Noon	19° 52′	87° 9′	29·600	N. to NE.	Light.	
	8 P. M.				W. to W. N. W.	Gentle.	8 P. M. same weather, much lightning.
Scottish Chieftain.	4 A. M.			29·640	S. S. W.	0	A strong current setting about W. Winds very unsteady in force and direction.
	8 A. M.	N.	E.		S. E.	1	
	Noon	20° 04′	86° 58′	·600	E.	2	
	4 P. M.				E. S. E.	3	
	8 P. M.				E. N. E.	4	
	Midnt.			·580	S. E.	4	

Vessel.	Hour.	Latitude.	Longitude.	Probable reduced barometer.	Wind. Dir.	Wind. Force.	Remarks.
Roma	4 A. M.				W.		4 A. M. swell from S. S. W. overcast sky and rain.
	8 A. M.				North	3	8 A. M. Gentle breeze, sky clearing at intervals.
	Noon	N. 20° 19′	E. 86° 50′		N.	3	Noon, similar weather with southerly swell, light breeze, sky clearing at intervals.
	4 P. M.				N. E.	1	
	midnt.				N. E.	1	10 P. M. light showers.
Commilla ...	4 A. M.			29·635	E. N. E.	3	Light cloudy weather.
	8 A. M.			·642	E. N. E.	3	
	Noon	N. 22° 21′	E. 91° 50′	·607	E. N. E.	4	
	4 P. M.				East	4	Threatening appearance to S. E. Squally with very heavy rain.
	8 P. M.			·543	S. S. E.	4	Continuous heavy rain.

The Nancowry and Port Blair observations prove that strong steady south-westerly winds continued to blow in that part of the Bay. These winds were also extending to Diamond Island. The average wind velocity during the past 24 hours at that station was 10 miles, and for the previous day had been 8 miles per hour. The sea was also reported to be rising. Hence it is certain that the vigorous current indicated by the strong winds at Port Blair on the 25th was steadily advancing up the east of the Bay, and that its front was off the West Burmese coast on the morning of the 26th. The Pemba, which left Rangoon at 10 A. M., had south-westerly winds of force 5 with frequent rain squalls, as she advanced westwards in the Martaban Gulf to the south of the Burmese coast.

It is almost certain that this strong current was giving heavy rain over a portion of the north-east of the Bay in the neighbourhood of the Burmese and Arracan coasts. The direct evidence of this does not appear in the extracts from the logs of the vessels given above, but it will appear in those for the 27th. It is, however, indicated by the large rainfall at Diamond Island and other stations in South Burmah and in Arracan.

For the present we shall accept it as almost certain that in the front

of this advancing strong moisture current, where the resistance to its advance was greatest, and where therefore ascensional motion was necessarily occurring to a large extent, rainfall of a more or less concentrated character was going on. The current was being deflected to the west by the coast and the Burmese and Arracan hills, and was moving more rapidly in its eastern than in its western portion. Hence probably also arose a strong tendency to an eddying motion in front and towards the west. The various actions going on were thus such as might set up vorticose motion. That such a result was taking place was indicated by the wind observations of all the vessels near the Head of the Bay. The Himalaya, in Lat. 17° 32′ N. and Long. 84° 75′ E., had moderate westerly winds. The India, British Princess, Star of Albion, Scottish Chieftain, Saint Magnus, Roma, and Prince Amadeo, which were all between Lat. 19° 20′ N. and 20° 19′ N. and between Long. 86° 20′ E. and 87° 18′ East, experienced light unsteady north-easterly winds. The weather was fine and sky clear during the greater part of the day, but became more clouded during the evening. There was a heavy swell from the south during the day. This was evidently due to the strong winds and high sea prevalent in the centre and south-east of the Bay. The only log which gives any indication of the subsequent weather is that of the Prince Amadeo, in which the Captain notes that, although light variable airs were blowing, the appearance of the sky was unsettled in all directions. Probably the light green sky to the east noted by the Captain of the British Princess was another sign of the large amount of moisture brought up by the southerly winds in the East of the Bay.

The various observations of the 26th hence indicate that cyclonic motion on a considerable scale commenced on the afternoon of the 25th over a portion of the Head of the Bay. The atmospheric whirl was fed and maintained by a very strong south-westerly air current moving northwards up the Bay near the Burmah and Arracan coast. It was apparently formed in the front of this air-current, and was causing winds to draw round over the north-west of the Bay. The indraught from that quarter was, however, feeble and unimportant, except as an indicator of bad weather to the south-east.

27th June.—The decrease of pressure which commenced on the 26th had now extended over the whole country. The change was still greatest in the north. On the northern frontier of the Punjab, in Eastern and Lower Bengal, and at Akyab the decrease exceeded one-tenth of an inch. It was smallest in parts of Bombay and Madras, where it only amounted to two or three-hundreths of an inch. A considerable depression lay over the Punjab. This, however, is a frequent feature of the hot weather months of June and July in that province. A smaller depression was, however,

forming at the Head of the Bay to the south of Saugor Island. Pressure ranged from 29·9 inches in Ceylon to 29·28 inches at Peshawar.

The wind was from directions between south-west and west over the Peninsula. In the neighbourhood of the two depressions, cyclonic circulations were established. Up the Gangetic valley the wind had a general easterly direction. The weather was cloudy and gloomy in all parts of the country except in the upper districts of the Punjab. Rain in small amounts had fallen during the preceding 24 hours, except in the Punjab, Sind, and West Madras. The rainfall was heavier on the Bombay coast than it had been hitherto, and strong monsoon winds were blowing there.

The following table gives the observations at the selected stations on and over the coast of the Bay on the 27th :—

Stations.	10 A. M. Barometer reduced to sea level.	Change since yesterday.	Wind.		Average wind velocity	Wind percentage	10 A. M. Cloud.	Rainfall of previous 24 hours.
			10 h.	16 h.				
Nancowry	29·912	—·003	S. W.	S. S. W.	15	136	8	...
Port Blair	29·853	—·033	S. W.	S. W.	13	118	10	...
Diamond Island ...	29·763	—·038	S. S. W.	S. S. W.	14	175	8	1·79
Akyab	29·606	—·105	S. S. E.	S. S. E.	6	150	10	0·57
Chittagong	29·578	—·082	E. N. E.	S. E.	3	43	4	1·02
Dacca.....	29·566	—·116	E.	E.	3	38	8	1·16
Jessore	29·604	—·069	E. N. E.	E.	6	120	10	0·04
Calcutta (Alipore)	29·529	—·117	E. S. E.	E.	5	83	9	0·20
Saugor Island	29·532	—·115	N. N. E.	N. E.	35	250	7	0·09
Balasore	29·537	—·099	N.	?	1	?	8	0·40
Cuttack.....	29·565	—·061	N. W.	N. N. W.	3	75	10	1·01
False Point	29·544	—·077	W.	W. S. W.	7	70	10	0·26
Vizagapatam	29·634	—·034	W.	W. S. W.	7	175	10	1·70

The preceding observations show that pressure had decreased rapidly over the north of the Bay and the adjacent coasts during the preceding 24 hours. The fall was greatest in South-West Bengal and more especially at Saugor Island. The distribution of pressure, taken in connection with the wind directions at the Bengal and Orissa stations, in-

dicates that there was now a well-defined atmospheric whirl at the Head of the Bay, the centre of which was at a little distance to the S. S. E. of Saugor Island. Pressure was below the normal for the day over the province of Bengal by amounts varying from ·1″ at Chittagong to zero at Patna. Winds were very light over the whole province. Northerly winds had fully set in over South-West Bengal and Orissa, whilst winds more or less easterly prevailed over East and North Bengal, Behar, and Chutia Nagpore.

Ths weakness of the winds is shown by the following observations :—

	Amount of wind during 24 hours preceding 10 A. M.	Average wind amount. June.	Percentage of actual to average.
Calcutta	139·0	152·3	91·3
Berhampore	94·7	132·3	71·6
Dacca	63·1	183·7	34·3
Purneah	24·0	94·4	25·3
Hazaribagh	130·5	214·9	60·9

The slight indraught to the cyclonic disturbance from the north and east had already diminished the humidity of the air and the amount of cloud in North Bengal and Behar. The sky was overcast in Orissa and South-West Bengal and the southern districts of East Bengal. The rainfall in the province was small in amount and localized in its distribution, except in Orissa and the southern districts of South-West Bengal, where moderate rain had already began to fall in connection with the cyclonic disturbance.

The weather in Orissa at this time is described as unsettled. Winds were light and variable and gave occasional showers of rain.

The following table gives the average rainfall in each of the divisions of Bengal for the 24 hours preceding 6 P. M. :—

Rainfall Table of the 27th June 1883.

Province.	Number of stations in each division.	Average Rainfall of preceding 24 hours.	Heaviest fall reported in 24 hours.
Orissa	16	0·17	2·25
South-West Bengal	46	0·28	2·20
East Bengal	26	0·49	2·50
North Bengal	27	0·09	0·57
North Behar	16	0·13	0·67
South Behar	17	0·16	0·69
Sonthal Pergunnahs and Chutia Nagpore	16	0·24	0·84

The meteorological extracts from logs of the vessels relating to the 27th of June are tabulated below for reference.

Vessel.	Hour.	Latitude.	Longitude.	Probable reduced barometer.	Wind.		Remarks.
					Dir.	Force.	
Bancoora	4 A. M.			29·751	S. W.	4	Brisk breeze, fine.
	8 A. M.			·796	SW. by S.	4	Fresh following wind and fine.
	Noon	N. 11° 42′	E. 84° 8′ 30″	·796	S. W.	4	Current S. 23 W. 17 miles.
	4 P. M.			·706	S. W,	4	Fresh following wind and fine.
	8 P. M.			·816	S. W.	5	Strong breeze and overcast.
	Midnt.						Less wind with occasional rain.
Pemba	4 A. M.			29·690	S. W.	5	A. M. Fresh breeze with moderate sea and occasional rain squalls.
	8 A. M.			·720	S. S. W.	6	6-15 A. M. Passed Alguada.
	Noon	N. 16° 13′	E. 93° 30′	·720	S. S. W.	7	Noon. Strong breeze with rising sea.
	4 P. M.	(by D.R)	(by D.R)	·690	S. S. W.	9	Afternoon. Wind rapidly increased to a strong gale with furious squalls blowing away sails and awnings.
	8 P. M.			·660	S. S. W.	9	
	Midnt.			·640	S. S. W.	9	
Himalaya	4 A. M.			29·514	N. W.		
	8 A. M.	N.	E.	·549	N. N. W.		
	Noon	19° 58′	86° 32′	·484	N. E.		Moderate breeze and fine.
	4 P. M.			·404	N.		
	8 P. M.			·447	N.		
	Midnt.			·359	N. N. W.		Overcast with rain.
Star of Albion	8 A. M.						Squally, with rain distant thunder to Northward and heavy looking clouds.
	Noon	N. 20° 10′	E. 87° 28′	29·500	W.	4	
	4 P. M.				N. W.	4	Clearer to S. E.

Vessel.	Hour.	Latitude.	Longitude.	Probable reduced barometer.	Wind. Dir.	Wind. Force	Remarks.
British Princess	4 A. M.				N. W.	5	Cloudy sky, southerly swell.
	8 A. M.				N. W.	5	Heavy squall with rain, overcast, passing showers.
	Noon	N. 20° 38′	E. 88° 2′	29·500	N. W.	5	Heavy rain at intervals, sky overcast and weather finer.
	4 P. M.				N. W.	5	Sky looking very unsettled patches of green colour.
	8 P. M.				N. W.	6	11 P. M. Heavy bank of clouds in the N. W. with vivid lightning, distant thunder, and rain.
	Midnt.				N. W.	7	
Scottish Chieftain.	4 A. M.				W. S. W.	1	The whole of this day, the weather has been very unsteady. — Strong westerly current.
	8 A. M.			29·520	S. W.	2	
	Noon	N. 20° 40′	E. 87° 50′	·480	S. W.	3	
	4 P. M.			·460	N. W.	4	
	Midnt.			·450	N. W.	5	
Saint Magnus	4 A. M.			29·500	W. N. W.		Cloudy, rainy, squally weather.
	8 A. M.			·540	North	5	Thick rainy weather.
	Noon	N. 20° 44′ (by D. R.)	E. 87° 54′	·450	N. W.	5	Cloudy and passing showers.
	4 P. M.			·400	N. W.	2	Squally, rainy weather.
	8 P. M.			·460	N. N. W.	4	

Vessel.	Hour.	Latitude.	Longitude.	Probable reduced barometer.	Wind. Dir.	Wind. Force.	Remarks.
Prince Amadeo	4 A. M.	N.	E.		N. W.		Midnight—Moderate W. to W. N. W. winds unsettled looking weather. 4 A. M. Squally with heavy rain. Noon, squally winds from N. W. to N. E., much rain high S. to S. S. E. swell. 8 P. M. Moderate N. W. winds, weather same.
	Noon	20° 46′ (by D. R)	87° 35′ (by D. R)	29·500		Vble	
India	4 A. M.			29·530	E.	3	Moderate and overcast.
	8 A. M.			·520	E.	2	
	Noon	N. 20° 39′	E. 88° 5′	·520			
Roma	4 A. M.				...	3	A. M. Light showers 3 A. M. Anchored at Saugor. 9 A. M. proceeded up the river, weather showery.
	8 A. M.				...	5	
	Noon				N. E.	...	
Commilla	8 A. M.			29·523	S. S. E.	3	Cloudy and threatening to S. E.
	Noon	N. 22° 21′	E. 91° 50′	·499	S. S. E.	4	Heavy unsettled appearance to S. E.
	4 P. M.			·396	South	4	Squally unsettled appearance to S. E.
	8 P. M.			·411	S. S. E.	4	Hard squalls and threatening appearance with light rain at times. High sea getting up from S.
	Midnt.			·379	S. S. W.	5	Wild squally weather. High sea from S. S. W. Rain at times.

The strong south-west monsoon winds which the meteorology of the 26th shewed to be advancing northwards up the eastern part of the Bay, were on the morning of the 27th not far from the Head of the Bay and were certainly in the parallel of Akyab. The wind velocity was very considerable at Port Blair and Nancowry. Strong winds were also blowing at Diamond Island, where the sea was now rough. The wind velocity at Akyab had increased from a rate of 4 miles per hour to 6 miles per hour, the average force of the wind in June at that station being 4 miles. The remarks in the log of the Pemba are very valuable. She passed round Cape Negrais into the Bay to the west of Burma in the morning. The wind increased very rapidly to a strong gale and blew in furious squalls. The wind was steady at S. S. W. and of average force 9. On the other hand, the winds at the stations in South Bengal and Orissa, and also those observed at the Light Vessels and the vessels near the Head of the Bay, were very feeble. The only conclusion warranted by the evidence is that these strong winds on the Burmah and Arracan coast were feeders to an ascending current to the northward; and that the ascensional movement was hence near the Head of the Bay, and was partly maintained by the rainfall accompanying the ascensional motion, and by the various resistances to the motion of the strong current advancing northwards. The south-west winds, it has already been remarked, were much stronger than those from any other direction. It is, so far as can be judged, probable, if not certain, that the whirl was not at this time a fully developed cyclonic disturbance with a well-defined centre. The centre of the barometric depression at the Head of the Bay can only be roughly approximated from the observations. Its most probable position at noon was in Lat. $20\frac{1}{2}°$ N. and Long. $89\frac{3}{4}°$ E. and almost identical with its position at 10 A. M. Assuming this position of the centre of depression, the relative positions of the Light Vessels at 10 A. M. and of the ships at Noon are given in the following table :—

	Time.	Position.		Barometer.	Wind.		Direction of Centre.	Distance from probable position of Centre.	Weather.
		Latitude.	Longitude.		Direction.	Strength.			
								Miles.	
Saugor Island Light House...	10 A. M.	N. 21° 39′	E. 88° 5′	29·505	N.N.E.		S.E.	120	Cloudy.
Upper Gasper Light Vessel ...		N. 21° 31′	E. 88° 3′	29·484	N. E.	4	ESE	120	Squally.

	Time.	Position.		Barometer.	Wind.		Direction of centre.	Distance from probable position of centre.	Weather, &c.
		Latitude. N.	Longitude. E.		Direction.	Strength.			
Intermediate Light Vessel...	Noon.	21° 15′	88° 11′	29·472	E.N.E.	3	ESE	miles 115	Showery.
Eastern Channel Light Vessel...	...	21° 1′	88° 12′	29·478	N.N.E.	5	ESE	105	High Sea.
Balasore	...	21° 30′	86° 50′	29·479	N.		ESE	205	Gloomy.
False Point	...	20° 20′	86° 47′	29·522	S. W.		E.	195	Gloomy.
Saint Magnus.....	...	20° 44′	87° 54′	29·450	N. W.	5	E.	120	Squally.
Scottish Chieftain	...	20° 40′	87° 50′	29·480	S. W.	3	E.	120	Unsettled.
Star of Albion ...	...	20° 10′	87° 28′	29·570	W.toS. W. &N.W.	4	ENE	150	Squally.
British Princess	...	20° 38′	88° 2′	29·500	N. W.	5	E.	110	Unsettled.
Prince Amadeo ...	...	20° 46′	87° 35′	29·500	NW. to N. E.		E.	145	Squally.
Himalaya	...	19° 58′	86° 32′	29·484	N. E.		ENE	210	Fine.
Pemba	...	16° 13′	93° 30′	29·720	S.S.W.	7	N. W.	380	Strong increasing breeze.

The position of the centre at 4 P. M. was probably almost identical with its position at noon. The following observations taken at 4 P. M. indicate that it was at that hour in Lat. 20° 35′ N. and Long. 89° 35′ E.

	Position.		Barometer.	Wind.		Direction of centre.	Distance from probable position of centre.	Weather, &c.
	Latitude. N.	Longitude. E.		Direction.	Strength.			
Sangor Island Light House...	21° 39′	88° 5′	29·407	N. E.	Light.	S.E.	miles 125	Cloudy.
Upper Gasper Light Vessel...	21° 31′	88° 3′	29·375	Calm.	0	E.S.E.	120	
Intermediate Light Vessel...	21° 15′	88° 11′	29·355	N.N.E.	1	E.S.E.	102	Sea rough.
Eastern Channel Light Vessel...	21° 1′	88° 12′	29·377	N. E.	2½	S.E.	95	Stormy.
False Point	20° 20′	86° 47′	29·406	WS.W.	moderate	E.	175	Gloomy.

The Bancoora was in Lat. 11° 42′ N. and Long. 84° 8′ E. at noon. She had strong steady south-west winds of force 4 during the day, with overcast skies and occasional rain.

The Pemba was in the north of the Gulf of Martaban early in the morning, when she experienced fresh breezes with moderate sea and occasional rain-squalls. She doubled Cape Negrais and passed into the Bay of Bengal about midday. The wind began to increase rapidly, and during the afternoon and evening it blew a gale with furious squalls, which carried away her sails and awnings. The wind blew steadily from the S. S. W. during the afternoon with average force 9.

The remaining vessels were all in the north-west angle of the Bay. They were the India, Himalaya, Star of Albion, Scottish Chieftain, Saint Magnus, British Princess, and Prince Amadeo, and were at noon between Lat. 19° 58′ and Lat. 20° 46′ N. and between Long. 86° 32′ and 88° 5′ E. Their observations enable the storm-centre to be approximately identified, as in the majority of these vessels the usual midday observations were taken; so that the positions of the vessels are known in nearly all cases with approximate exactness at noon of this day.

The Saint Magnus and British Princess were very near each other. The former was in Lat. 20° 40′ N. and Long. 87° 50′ E. and the latter in Lat. 20° 38′ N. and Long. 88° E. Both experienced strong currents during the day. These two vessels were probably nearest the centre, but in the westerly quadrant. They had squally weather with thick rain and north-westerly winds of average force 5.

The Scottish Chieftain, which was about 10 miles to the west of the previous vessels, had very variable winds during the day, which increased in force from 1 to 5. They shifted from W. S. W. to S. W., and then hauled to N. W. She experienced a strong westerly current.

The Prince Amadeo, about 15 miles further to the west, in Lat. 20° 46′ N. and Long. 87° 35′ E., had unsettled weather with light variable winds and heavy rain. She experienced a strong southerly current.

The Himalaya, which was considerably further to the west and near the Orissa coast, had moderate north-easterly breezes and fine weather.

28th June.—The barometer rose quickly in the Punjab, during the previous 24 hours, and was standing at its normal height at 10 A. M. Pressure continued to give way over the rest of India. The fall was not large in amount, except in and near the depression at the Head of the Bay. The barometer had fallen at Saugor Island from 29·53″ at 10 A. M. on the 27th to 29·37″ at the same hour of the 28th.

The wind had backed to south-west and south over the Central Provinces, Central India, and Rajputana. This was evidently due to the continuance of strong westerly winds on the Bombay coast and their

extension eastwards over the centre and north of the Peninsula. Light easterly winds were blowing, as on the 27th, up the Gangetic plain, indicating that the circulation was as yet unaffected in direction by the atmospheric whirl in the north of the Bay. To the north of the centre of depression, or in South Bengal, the circulation was increasing, but was still very weak. The weather was generally cloudy, and rain had fallen in moderate amounts over the same areas as on the 27th.

The observations at the selected stations in Bengal are given below :

Stations.	Barometer at 10 A. M. reduced to sea level.	Change since yesterday.	Wind.		Average wind velocity of previous 24 hours.	Percentage wind.	10 A. M. Cloud.	Rainfall of previous 24 hours.
			10 h.	16 h.				
Nancowry	29·913	+ ·001	S. W.	S. W.	13	118	6	nil.
Port Blair	29·856	+ ·003	S. W.	S. W.	12	109	6	0·13
Diamond Island	29·807	+ ·044	S.	S. S. W.	29	363	9	0·25
Akyab	29·639	+ ·033	S.	S. S. W.	12	300	10	6·84
Chittagong	29·571	— ·007	S. E.	E. S. E.	9	129	9	3·81
Dacca	29·526	— ·040	E.	E.	6	75	10	0·85
Jessore	29·445	— ·159	E.	E. S. E.	6	120	10	0·10
Calcutta (Alipore)	29·392	— ·137	E.	E. by N.	9	150	10	0·22
Saugor Island ...	29·374	— ·158	N. N. E.	N. N. E.	8	57	10	0·91
Balasore	29·423	— ·114	N.	?	2	?	10	0·32
Cuttack	29·507	— ·058	calm.	N. W.	4	100	10	0·62
False Point	29·452	— ·092	W. S. W.	W. S. W.	10	100	10	4·84
Vizagapatam ...	29·614	— ·020	W.	W.	7	175	10	0·20

Pressure had given way over the whole of the Province of Bengal, and was below the normal of the day by amounts varying between ·05″ at Patna and ·25″ at Saugor Island. The air-motion over the whole of Bengal was now largely dependent on the cyclonic vortex. In East and South-West Bengal winds ranged between east and north-east. Northerly winds prevailed at Balasore, and south-west winds at Gopalpore and False Point. The air was calm at 10 A. M. at Cuttack. Over North Bengal,

Behar, and Chutia Nagpore light easterly winds were blowing. The indraught to the vortex had diminished the humidity and cloud-amount considerably in North Bengal and Behar during the previous 24 hours, as shown by the following results :—

	10 A. M. Average Humidity.		Average Cloud Amount.	
	27th.	28th.	27th.	28th.
North Bengal	81	73	6·0	4·0
North Behar	79	72	4·8	3·2
South Behar	80·5	70·4	6·8	4·4

The rainfall returns for the 24 hours previous to 6 P. M. indicate that moderate general rain had fallen over the whole of East and South-West Bengal, and that very heavy rain had been received in Orissa.

The following table gives the whole of the Orissa rainfall returns for the day :—

District.	Station.	Rainfall.
Pooree	Pooree	0·59
	Khurdah	0·60
	Banpur	nil.
	False Point	8·04
	Hookitola	3·68
Cuttack	Jagatsingpore	7·50
	Banki	0·35
	Cuttack	1·79
	Kendrapara	2·70
	Jaipur	2·80
Balasore	Chandbali	3·25
	Bhuddruck	1·78
	Sora	1·50
	Balasore	0·94
	Jellasore	3·40
	Baripoda	1·12

The weather on the Orissa coast is thus described by an observer : "Thick heavy weather with heavy rain and overcast skies prevailed

during the day. At 4 P. M. it was blowing hard. Heavy rain fell all night with variable winds."

A few light showers fell in North Bengal and Chutia Nagpore, but rain had almost entirely ceased in Behar.

The following table gives the average rainfall throughout the Province of Bengal, and indicates clearly its distribution :—

District.	Average rainfall of previous 24 hours.	Heaviest rainfall in 24 hours.
Orissa	2·50	8·04
South West Bengal	0·15	0·76
East Bengal	0·65	6·46
North Bengal	0·17	1·25
North Behar	0·03	0·30
South Behar	0·01	0·10
Chutia Nagpur and Sonthal Pergunnahs	0·13	0·70

The information respecting the weather in the Bay on the 28th June, extracted from the logs of the vessels, is given in the following statement :—

Vessel.	Hour.	Latitude. N.	Longitude. E.	Probable reduced barometer.	Wind. Dir.	Wind. Force.	Remarks.
Bancoora	4 A. M.			29·653	S. W.	3	Moderate breeze and puffy.
	8 A. M.			·716	S. W.	3	Overcast at times.
	Noon	15° 08′	85° 33′	·683	S. W.	3	Moderate following wind and overcast.
	4 P. M.			·801	S. W.	3	Moderate breeze and overcast.
	8 P. M.			·716	S. W.	3	Moderate following wind and fair.
	Midnt.			·671	S. W.	4	Fresh breeze and cloudy.
Pemba ...	4 A. M.				S. S. W.	9	A. M. Strong gale with high sea and heavy squalls. Noon. A heavy sea smashed in the port bulwark rail forward of bridge. Midnight. Very high sea running.
	8 A. M.			29·540	...	9	
	Noon	18° 34′	90° 59′	·540	...	9	
	4 P. M.	Rangoon to-		·460	...	9	
	8 P. M.	wards	Sand	·500	...	9	
	Midnt.	Heads.		·520	...	9	

Vessel.	Hour.	Latitude. N.	Longitude. E.	Probable reduced barometer.	Wind. Dir.	Wind. Force.	Remarks.
Star of Albion ...	8 A. M.			29·500			Wind freshening, weather cloudy and threatening.
	Noon	20° 14′	88° 23′	·450	N. by W.	5 to 8	Continued lightning. Slight sea.
	4 P. M.			·440	W. N. W.		Latter part, strong gale with thick driving rain, and westerly sea.
	8 P. M.			·490			
	Midnt.			·470	West.		
British Princess	4 A. M.				N. W.	7	4 A. M. Heavy rain, vivid lightning with thunder.
	8 A. M.				...	7	
					...	8	High confused sea. 8 A. M.
	Noon	20° 46′	88° 7′	29·420	W. N. W.	9	Heavy squall with torrents of rain. Moderate gale, high confused sea.
	4 P. M.				West	10	
	8 P. M.				S. W.	10	
					...	11	Noon. Fresh gale, high confused sea. 4 P. M. Fresh gale, high sea, and heavy rain. 8 P. M. Heavy squalls, torrents of rain, high sea. Midnight. Furious squalls, torrents of rain, and high sea.
	Midnt.				...	11	
Scottish Chieftain	4 A. M.			29·400		1	Noon. Weather very unsteady, much rain, thunder and lightning. Very strong westerly current.
	8 A. M.			·300	N. N. W.	2	
	Noon	20° 50′	88° 10′	·250	...	3	
	4 P. M.			·220	N. W.	4	Sky presenting a very wild appearance.
	Midnt.			·200	W.	8	
Saint Magnus	4 A. M.			29·330	N. W.	6	Heavy gusts and heavy continued rain.
	8 A. M.			·330			Strong winds and high sea.
	Noon	20° 52′	88° 3′	·290	N. W.	4	Winds and sea more moderate.
	4 P. M.			·260	W. S. W.	6	Terrific squalls. Tremendous sea at times.
	8 P. M.			·320	W. S. W.	2	Heavy sea, dense darkness.
	Midnt.			·300	S. W.	10	Furious gale, high squalls, heavy sea.
Prince Amadeo	4 A. M.				N. W.	Strong	Midnight. Boisterous squally weather with much heavy rain. 4 A. M. Squally weather, high southerly sea. Noon. Squally unsettled weather. 4 P. M. Weather more moderate. 6 P. M. Weather having a wild unsettled appearance. 8 P. M. Heavy squalls from W. S. W. to S. S. W. much rain.
	Noon	Pilot bearing about	Brig N. E. 5 miles	29·330	N. W. and W. N. W.		
	6 P. M.				Variable between W. & S.		

Vessel.	Hour.	Latitude. N.	Longitude. E.	Probable reduced barometer.	Wind. Dir.	Wind. Force.	Remarks.
	4 A. M.			29·379	South	7	4 A. M. Very high sea from South and S. W. Breeze very variable in force with very hard squalls from S. S. W. and rain. 8 A. M. A very high sea running from S. S. W. Noon. Hard squalls from S. S. W. and very high sea from S. W. 4 P. M. Hard squalls from S. S. W. and very high sea from S. S. W. 6 P. M. Breeze very unsettled and hauling to N. W. at times. 6-30 P. M. Very heavy rain, tremendous sea from S.S. W. and S. W. 7 P. M. Eased down and stood S. by E. 7-30 P. M. Terrific sea carried away starboard cutter. 8 P.M. Terrific squalls from S. W. and very high sea. New jib and stay sail split.
	8 A. M.			·317	S. S. W.	7 to 4	
Commilla	Noon	21° 04′	89° 31′	·277	S. S. W.	6	
	4 P. M.			·121	S. W.	8	
	6 P. M.				Var.	6	
	8 P. M.			·159	S. W.	9 to 10	
	Midnt.			·182	S. W.	11	
	4 A. M.			29·354	Variable		
	8 A. M.				N.		
Himalaya	Noon	22° 32′	88° 20′	·264	N.		Fresh breeze and cloudy, with frequent rain squalls.
	4 P. M.			·354	N.		
	8 P. M.			.449	N.		
	Midnt.			·427	N.		

The position of the centre of the barometric depression can be determined with approximate accuracy on the 28th. The observations at the Light Vessels show that it was in the immediate neighbourhood of the Sandheads at 10 A. M. It was hence very approximately in Lat. 21° 0′ N. and in Long. 88° 45′ E. The following table gives the barometric and wind observations taken at the Light Vessels and nearest

land stations, as well as the distance and direction of the centre (assuming this to be in the position assigned to it above) from each :—

	Position.		Barometer 10 A. M.	Wind 10 A. M.		Direction of centre.	Distance from probable position of centre.	Weather, &c.
	Latitude. N.	Longitude. E.		Direction.	Strength.			
Saugor Island Light House ...	21° 39′	88° 5′	29·349	N.N.E.	Strong.	S. E.	miles 63	Gloomy.
Upper Gasper Light Vessel...	21° 31′	88° 3′	29·327	N. E.	5	S. E.	57	Threatening heavy sea.
Intermediate Light Vessel...	21° 14′	88° 11′	29·241	N.N.E.	4	E.S.E.	40	Threatening.
Eastern Channel Light Vessel ...	21° 0′	88° 12′	29·209	N.N.E.	6	E.	35	High sea.
Balasore	21 30	86° 58′	29·364	N.	Light.	E.S.E.	130	Threatening.
False Point	20° 20′	86° 47′	29·431	W.S.W	Moderate	E.N.E.	135	Gloomy.

The centre at this time was only at a distance of about 35 miles from two of the Light Vessels ; yet these were experiencing comparatively feeble winds, as compared with the strong gales blowing, as the log of the Pemba proves, at distances of 200 and 300 miles from the centre in the south-easterly quadrant.

The ships' logs do not give 10 A. M. observations. Their positions are given for noon, together with barometric readings and wind directions and force. When these are charted, they indicate the existence of a centre of depression in about Lat. 21° 3′ N. and Long. 88° 40′ E. The following table gives the positions of the ships at noon, and the distance and direction of the centre (assuming the position of this to be in Lat. 21° 3′ N. and Long. 88° 40′ E.) in each case.

	Position at noon.		Barometer at Noon.	Wind (Noon).		Direction of centre.	Distance from probable position of centre at Noon.	Weather.
	Lat. N.	Long. E.		Direction.	Strength.			
Sauger Island Light House	21° 39′	88° 5′	29·311	N. N. E.	Light.	S. E.	56	Overcast.
Commillah ...	21° 04′	89° 31′	29·277	S. S. W.	6	W.	54	Hard squalls. Very high sea.
Scottish Chieftain	20° 50′	88° 10′	29·250	N. N. W.	3	E. N. E.	35	Unsettled.
Saint Magnus	20° 52′	88° 3′	29·290	N. W.	4	E. N. E.	42	Strong wind. High sea.
Prince Amadeo	20° 52′	88° 5′ ?	29·330	N. W.	...	E. N. E.	40	Squally. High sea.
British Princess	20° 46′	88° 7′ ?	29·420	N. W.	8	E. N. E.	43	Heavy squalls High sea.
Star of Albion	20°14′?	88°23′?	29·450	N. by W.	5	N. N. E.	?	Threatening weather. Slight sea.
Pemba	18° 34′	90° 59	...	S. S. W.	9	N. W.	225	Strong gale. Heavy sea.
False Point ...	20° 20′	86° 47′	29·309	W. S. W.	Moderate.	E. N. E.	125	Overcast.

In examining the above, it should be remembered that the positions assigned to the Commillah, Scottish Chieftain, Saint Magnus, and Star of Albion were determined by observation at noon, and hence are assumed to be approximately correct. The position of the Prince Amadeo is stated to have been a few miles to the S. W. of the Pilot Brig. The position given has been determined from that statement on the assumption that the station for the Pilot Vessels during the S. W. monsoon, is at a distance of from 7 to 10 miles to the south or south-west of the Eastern Channel Light Vessel (*vide* Elson's Sandheads Sailing Directory, page 156); and is probably correct within five or six miles. The position of the British Princess at noon was ascertained by dead reckoning, and is certainly not correct, as all the vessels had drifted considerably with the currents now set up at the Head of the Bay. The noon observations of the barometer and wind direction indicate that she was probably in about Lat. 20° 55′ and Long. 87° 45′.

The preceding table confirms much of the information given by the Light Vessels. The winds in the western quadrant, at distances of 30 to 50 miles from the centre, were very light and unsteady in force, as compared with those in the eastern quadrant. The barometric observations,

when charted, shew that the depression, as defined by the isobar of 29·3″, was an elliptical shaped area at the centre of which the pressure probably did not exceed 29·2″. The larger axis of this stretched E. N. E. and W. S. W., and was probably at least twice as long as the axis at right angles to it.

The observations taken on board the Light Vessels at 4 P. M. also enable the centre to be approximately determined at that hour. When charted, they indicate that the centre was in about Lat. 21° 10′ N. and Long. 88° 30′ E.

The following table shows that this gives consistent results for the direction and distance of the centre from each position :—

	Position.		Barometer.	Wind.		Direction of centre.	Distance from probable position of centre.	Weather, &c.
	Lat. N.	Long. E.		Direction.	Strength.			
Saugor Island Light House	21° 39′	88° 5′	29.270	N. N. E.	Moderate.	S. E.	43	Overcast.
Upper Gasper Light Vessel	21° 31′	88° 3′	29·215	N. E.	5	S. E.	38	Heavy sea.
Intermediate Light Vessel	21° 15′	88° 11	29·155	N.	4	E. S. E.	21	Threatening weather.
Eastern Channel Light Vessel	21° 1′	88° 12′	29·142	N. W.	5 to 8	E. N. E.	23	High sea from S. W.
False Point Light House	20° 20′	86° 47′	29·301	W. S. W.	strong.	E. N. E.	125	Overcast.

These observations also show the weakness of the winds in the western quadrant. The Intermediate Light Vessel, although only 21 miles distant from the centre, experienced winds of force 4 at this time, whilst the Pemba, about 200 miles to the south-east, had winds of force 9 to 10.

Hence, the path of the centre during the day is determined by the positions given in the following table :—

Hour.	Latitude.	Longitude.
10 A. M.	21° 0′ N.	88° 45′ E.
Noon	21° 3′ N.	88° 40′ E.
4 P. M.	21° 10′ N.	88° 30′ E.

The character of the weather is fully shown by the reports given in the logs. Two vessels, the Commillah and Pemba, were in the east and south-east quadrants, in which alone the winds were violent. The Pemba was in Lat. 18° 14′ N. and Long. 90° 59′ E. by account at noon. She experienced strong S. S. W. gales during the whole day, with a high sea, and heavy rain squalls. A heavy sea smashed in her port bulwark rails early in the morning, after which the Captain eased the engines, and laid to, with the ship's head to S. S. E., during the greater part of the afternoon. The Commilla, which was proceeding from Chittagong to Calcutta, did not feel the full weight of the south-westerly winds until the afternoon, when she was between the Mutlah station and the Sandheads. She experienced, early in the morning, winds varying very considerably in force, with occasional hard squalls from S. S. W., and much rain. During the whole of the afternoon, she had very hard squalls with heavy rain, and a tremendous sea. At 7-20 P. M. a terrific sea carried away the starboard cutter. This was followed by very violent squalls of force 11 from the south-west.

The position of the British Princess was not ascertained by observation during the day, and it is almost certain that she must have drifted considerably with the strong currents set up at this time in the Head of the Bay. She was in the south-western quadrant in the morning, and had heavy rain with a high confused sea. The rainfall increased early in the morning, and during the greater part of the day she had "torrents of rain." The squalls also became heavier as the day advanced, and at midnight furious squalls (force 11) from the south-west passed over the vessel.

The Saint Magnus was in the western quadrant in the morning, when she had north-westerly winds of force 4 to 6. Heavy gusts of wind passed over the vessel, and continuous rain fell during the whole morning. In the evening, she was in the southerly quadrant, where she began to experience terrific squalls with a tremendous sea. At midnight, it was blowing a furious gale (force 10) from the south-west.

Hence, over a large area to the east and south-east of the central depression, violent south-westerly winds of force 9 to 11 were blowing at this time, producing a very high and dangerous sea near the Head of the Bay.

Further south, as shewn by the log of the Bancoora, the winds in the centre of the Bay (Lat. 15° N., Long. 83° E.) were of moderate force and gave very faint indications of the action and disturbance to the northward.

The Star of Albion, Roma, Prince Amadeo, and Scottish Chieftain were to the west of the centre of the whirl during the greater part of the day. The Scottish Chieftain was probably nearest to it at noon.

The position of the Star of Albion is doubtful. The weather was threatening in the morning, and the winds shifted from north through north-west to west in the evening, increasing in force during the day. In the afternoon and evening, as the wind backed to west, a strong gale set in with thick driving rain.

The Scottish Chieftain was in Lat. 20° 50′ N. and Long. 88° 10′ E. at noon. The winds were light during the morning; much rain fell, but it was not until midnight, when the wind hauled to west, that she began to have strong winds and rain squalls.

The Prince Amadeo was near the Pilot Station and to the west of the centre. Boisterous squalls with heavy rain and a high sea were experienced during the morning. In the evening, the weather had a very wild appearance. The wind shifted round to the south-west, and heavy squalls passed over the vessel, bringing up much rain.

The Light Vessels were all in the western quadrant during the day.

The Captain of the Meteor (Intermediate station) states that the winds were changeable between north and west, and that frequent heavy showers occurred during the day.

The Captain of the Comet (Upper Gasper Station) notes that the weather appeared very wild. Squalls with rain passed over the vessel, and a very heavy sea came up from the south-east.

29th June.—The changes of the barometer over India during the preceding 24 hours were partly due to the further development of the depression and cyclonic disturbance off the coast of the Sunderbands, and partly to the appearance of a depression off the west coast.

The barometer at Saugor Island had fallen two tenths of an inch since 10 A. M. of the 28th, and by considerable amounts at all the Lower Bengal stations. It had risen in the surrounding districts, so that the differences of pressure had become considerably greater and the depression very marked. The disturbance was now giving strong easterly winds, with overcast skies and moderate rain, to East and South Bengal, and strong northerly and westerly winds and incessant rain to Orissa.

The barometer had also fallen considerably at Kurrachee, where very strong N. E. winds were blowing. The wind had backed from west to south-west along the Bombay coast, thus almost certainly indicating the appearance or formation of a depression off the west coast.

Over the Gangetic plain and the western Himalayas, variable winds obtained, with cloudy weather and light rain.

The following table gives the observations at the selected stations in the neighbourhood of the Bengal depression :—

Stations.	Barometer at 10 A. M. reduced to sea level.	Change since yesterday.	Wind.		Average wind velocity of previous 24 hours.	Percentage wind.	10 A. M. Cloud.	Rainfall of previous 24 hours.
			10 h.	16 h.				
Nancowry	29·914	+ ·001	S. W.	S. W.	8	73	7	2·21
Port Blair.....	29·875	+ ·019	S. W.	S. W.	13	118	5	0·20
Diamond Island	29·835	+ ·028	S. S. W.	S. S. W.	13	163	8	0·40
Akyab	29·695	+ ·056	S. S. E.	S. S. E.	11	275	7	1·43
Chittagong ...	29·608	+ ·037	S. E.	E.	11	157	10	2·31
Dacca.....	29·530	+ ·004	E.	E.	13	163	10	0·26
Jessore	29·445	0	E.	E.	18	360	10	0·78
Calcutta (Alipore)	29·322	— ·070	E.	E.	19	317	10	0·64
Saugor Island	29·173	— ·201	E.	S. W.	26	186	10	...
Balasore	29·355	— ·068	N. N. W.	?	8	?	10	1·22
Cuttack.....	29·463	— ·044	N. W.	W. N. W.	6	150	10	3·83
False Point ...	29·440	— ·012	W. S. W.	W. S. W.	23	230	10	8·22
Vizagapatam...	29·613	— ·001	S. W.	W. by N.	6	150	10	...

The meteorological returns of the Bengal stations show that a large fall of the barometer had occurred in South-West Bengal and Orissa, whilst, over the remainder of the province, a considerable recovery of pressure was taking place. The depression off Saugor Island was now unusually large in amount, and such as is rarely observed in the rainy season. Pressure was below the normal of the day at all stations, by amounts varying between ·01″ at Durbhunga and ·45″ at Saugor Island. The atmospheric circulation in Bengal was now directly dependent on the cyclonic vortex off the coast of the Sunderbands, and winds were very strong in the neighbourhood of the vortex in South-West Bengal, Orissa, and Chutia Nagpore. The winds in Chutia Nagpore and South Behar at 10 A. M. were from directions between E. N. E. and N. N. E. In North Bengal and Behar the winds were from the east, the normal direction during the south-west monsoon.

The air was now almost saturated in East and South-West Bengal and Orissa. Humidity had also increased very considerably over the

remainder of the Province, more especially in South Behar and Chutia Nagpore. The skies were overcast, or densely clouded, in all parts of the Province, except North Bengal and Behar.

Orissa again received very heavy rain. The following table gives the amounts recorded at all the reporting stations during the 24 hours preceding 6 P. M. of this day :—

District.	Stations.	Rainfall.
Pooree	Pooree	9·44
	Khurdah	7·96
	Banpur	3·46
	False Point	5·39
	Hookitola	4·48
Cuttack	Jagatsingpore	4·90
	Banki	6·40
	Cuttack	5·61
	Kendrapara	3·60
	Jajpore	1·98
Balasore	Chandbali	4·15
	Bhuddruck	0·93
	Sora	1·60
	Balasore	2·65
	Jellasore	5·00
	Baripoda	1·60

General rain, moderate to heavy in amount, fell in East Bengal, South-West Bengal, and Chutia Nagpore, and local showers in North Bengal. No rain of any importance fell in Behar.

The following table gives the average rainfall for the preceding 24 hours in the various divisions of the Province of Bengal, and indicates the distribution at this time :—

Rainfall Table of the 29th June, 1883.

Division.	Number of stations in each province.	Average rainfall of 24 hours.	Heaviest fall in 24 hours.
Orissa	16	4·32	9·44
South-West Bengal	46	0·65	3·76
East Bengal	26	1·59	5·50
North Bengal	27	0·24	2·97
North Behar	16	0·03	0·25
South Behar	17	...	0·02
Sonthal Pergannahs and Chutia Nagpore	16	0·25	1·54

Vessel.	Hour.	Latitude. N.	Longitude. E.	Probable reduced barometer.	Wind.		Remarks.
					Direction.	Force.	
Bancoora	4 A. M.			29·597	S. W.	5	Strong increasing breeze and puffy.
	8 A. M.			·666	S. W.	5	Lightning in N. W.
	Noon	18° 40′	86° 58′	·666	S. W.	5	Strong unsteady wind and squally.
	4 P. M.			·517	S. W.	5	Strong breeze and squally.
	8 P. M.			·517	S. W.	4	Fresh following wind and overcast.
	Midnt.			·495	S. W.	5	Strong breeze with hard squalls throughout.
Pemba ...	4 A. M.			29·420	S. W.	10	A. M. Fierce gale with high irregular sea and hard squalls blowing with hurricane violence. 1 A. M. Kept away course again (N. 51 W.) 5 A. M. Lay to again. 9 A. M. Kept away course again, sea breaking over the ship fore and aft. 9-15 A. M. Laid to. 0·30 P. M. Course again. 3 P. M. Hauled to the wind again. 5 P. M. Kept away course again. 10-20 P. M. Sea becoming confused; weather inclined to moderate, sky clearing.
	8 A. M.			·470	W. S. W.	10	
	Noon	19° 16′	89° 56′	·500	S. W.	9	
	4 P. M.	Rangoon towards Calcutta.		·450	...	9	
	8 P. M.			·500	...	9	
	Midnt.			·530	...	7	
Star of Albion.	8 A. M.			29·520	W. S. W.		Hard gale and heavy sea, thick continued rain.
	Noon	19° 43′	88° 37′	·530	S. W.	9 to 10	
	4 P. M.			·520			
	8 P. M.			·570		9 to 10	
	Midnt.			·550	S. W.		Weather, more moderate and less rain.
Saint Magnus.	4 A. M.			29·230	W. S. W.	10	Heavy gale with terrific gusts, heavy sea, and continued heavy rain.
	8 A. M.			·300	W. S. W.	10	
	Noon	19° 58′	88° 28′	·370	W. S. W.	10	Heavy squalls, rain, and high sea.
	4 P. M.			·380	S. S. W.	9	Dirty appearance and heavy gusts.
	8 P. M.			·430	S. S. W.	8	
	Midnt.			·340	S. S. W.	8	

Vessel.	Hour.	Latitude. N.	Longitude. E.	Probable reduced barometer.	Wind.		Remarks.
					Direction.	Force.	
Prince Amadeo.	4 A. M.				W. to S. S. W.	8	Morning. Strong gale, furious squalls.
	Noon	20° 00′	88° 55′	29·320	S. W.	to	Sharp vivid lightning, wild unsettled
	Midnt.				S. W.	10	appearance. Noon. Strong gale, heavy squalls, sea high and very confused. Evening. Similar wind and weather.
Commilla	4 A. M.			29·190	S. W.	11	4 A. M. Terrific storm, continual rain, and
	8 A. M.			·247	S. W.	11	furious squalls. 8 A. M. Squalls of hurricane
	Noon	20° 18′	88° 40′	·252	S. W.	11	force. Mountainous sea. Noon. Very high
	4 P. M.			·232	S. W.	10	and dangerous sea running; both an-
	8 P. M.			·237	S. W.	10	chors lifted out of catchhooks, breaking
	Midnt.			·234	S. W.	10	one stock. 4 P. M. Wind and sea slightly moderating. Violent squalls from S. W. 8 P. M. Sky overhead clearing at times; very dark wild squally weather. Very heavy rain in the squalls.
British Princess	4 A. M.				S.W.byS.	11	Torrents of rain.
	8 A. M.					10	High confused sea.
	Noon	20° 24′	88° 42′	29·340		10	Westerly gale.
	4 P. M.					10	
	8 P. M.				S. W.	9	Sea very high.
	Midnt.				...	9	
Scottish Chieftain	4 A. M.				W. S. W.	10	Lost fore topsail, laid
	8 A. M.			29·250	...	11	ship to under close
	Noon	20° 40′	88° 10′	·300	...	10	reefed main topsail.
	4 P. M.			·350	...	8	
	8 P. M.				...	6	Heavy rain and confused sea. Very
	Midnt.			·400	S. W.	6	strong westerly current.

The various observations enable the centre of the barometric depression to be determined very approximately at 10 A. M. and at noon of the 29th. The wind directions at 10 A. M. observed on board the Light Vessels at the Upper Gasper and Intermediate stations were south-east and west, and hence the centre was between these vessels. Its position as determined by charting the wind directions and barometric heights was Lat. 21° 30′ N. and Long. 87° 55′ E.

The following table gives the chief observations taken at the light vessels and neighbouring land stations at 10 A. M., and the distance and bearing of the centre from each of them.

	Position.		Barometer.	Winds.		Direction of centre.	Distance from probable position of centre.
	Latitude. N.	Longitude. E.		Direction.	Strength.		
Sangor Island Light House.	21° 39′	88° 5′	29·146	E.	Moderate.	S. W.	14
Upper Gasper Light Vessel.	21° 31′	88° 3′	29·140	S. E.	5	W.	8
Intermediate Light Vessel.	21° 15′	88° 11′	29·164	W.	6	N. W.	24
Eastern Channel Light Vessel.	21° 1′	88° 12′	29·199	W. S. W.	8 to 9	N. W.	38
Balasore	21° 30′	86° 58′	29·296	N. N. W.	8	E.	60
False Point	20° 20′	86° 47′	29·419	W. S. W.	Strong	N. E.	110

The nearest light-vessels were between 5 and 25 miles from the centre in the eastern quadrant, and yet experienced very moderate winds of force 5 to 6, whilst the Pemba and Commillah, at much greater distances in the same quadrant, had winds of force 9 to 11.

The unusual weakness of the winds in all quadrants near the centre, as compared with those in the south-eastern quadrant at considerable distances from the centre, is a remarkable fact, and one that is opposed to the general experience of cyclonic motion.

The noon barometric readings and wind directions of the ships, when charted, indicate that the centre was at that hour probably in Lat. 21° 30′ N. and Long. 87° 50′ E. It had moved about five miles to the west during the previous two hours.

The following table gives the distance and bearing of the centre from each of the vessels at that hour :—

	Position.		Barometer.	Wind.		Direction of centre.	Distance from probable position of centre.
	Latitude. N.	Longitude. E.		Direction.	Strength.		
Saugor Island Light House.	21° 39′	88° 5′	29·146	E.	Moderate.	S. W.	19
Commillah	20° 18′	88° 40′	29·252	S. W.	11	N. W.	100
Scottish Chieftain	20° 40′	88° 10′	29·300	W.S.W.	10	N.N.W	60
Saint Magnus	19° 58′	88° 28′	29·370	W.S.W.	10	N.N.W	115
British Princess...	20° 24′	88° 42′	29·340	S.W. by S.	10	N. W.	95
Prince Amadeo.....	20° 00′	88° 55′	29·320	W.to S.S.W	8 to 10	N. W.	125
Star of Albion	19° 43′	88° 37′	29·53	S. W.	9 to 10	N.N.W	145
Pemba	19° 16′	89° 56′	29·50	S. W.	9	N. W.	200

The preceding table shows that the vessels were all in the south eastern quadrant. They were experiencing violent west to south-west winds with frequent squalls of hurricane force. The majority of them were for the first time feeling the full strength of the storm.

The storm continued to pass to the westward during the day. The centre was probably in Lat. 21° 35′ N. and Long. 87° 30′ E. at 4 P. M.

The observations taken at the light-vessels and the neighbouring land stations, with the probable distance and bearing of the centre from each, are given below :—

	Position.		Barometer.	Wind.		Direction of centre.	Distance from probable position of centre.
	Latitude. N.	Longitude. E.		Direction.	Strength.		
Calcutta (Alipore)	22° 32′	88° 20′	29·214	E.	Strong	S.S.W.	85
Burdwan	23° 14′	87° 54′	29·245	N. E.	Light	S.W.	115
False Point	20° 20′	86° 47′	29·361	W. S. W.	Strong	N.N.E.	98
Cuttack.....	20° 29′	85° 54′	29·285	W. N. W.	Light	N.E.	130
Saugor Island Light House.	21° 39′	88° 5′	29·112	S. W.	Very strong	W.	38
Upper Gasper Light Vessel.	21° 31′	88° 3′	29·108	S. W.	9	W.	36
Intermediate Light Vessel.	21° 15′	88° 11′	29·199	S. W.	9	W.N. W.	50
Eastern Channel Light Vessel.	21° 1′	88° 12′	29·237	S. W. by W.	8 to 9	W. N. W.	60

The preceding observations show that the light-vessels were now experiencing very strong south-westerly winds, and that frequent severe squalls passed over them.

The remarkable difference between the force of the south-westerly winds at distances of more than 30 miles from the centre and the winds from other directions and also the winds near the centre, is shown very conclusively by the Saugor Island observations. The greatest amount of wind, as registered by the anemometer at that station in any interval of two hours between 1 P. M. of the 28th and 3 P. M. of the 29th, was 23 miles. The amount recorded between 1 P. M. and 3 P. M. of the 29th, when very variable unsteady winds were blowing, was only 5 miles. Between 3 P. M. and 5 P. M., during which hours south-west winds prevailed, 78 miles of wind were recorded, and between 5 P. M. and 7 P. M., 46 miles. During this period, a severe gale of wind blew from the south, and gave rise to a tremendous sea.

The position of the centre has been deduced from the various observations. It moved during the day almost due westwards, parallel to the coast of the Sunderbunds. The vessels bound for Calcutta, which were approaching the entrance to the Hooghly, were almost without exception in the eastern quadrant during the day. Their logs describe the force of the south-westerly winds in this part of the whirl in very similar language.

The Commillah, in Lat. 20° 18′ N. Long. 88° 40′ E. at noon, had terrific gales, with continual rain and furious squalls, in the morning. Squalls of hurricane force passed over the steamer. A tremendous and dangerous sea was running. South-westerly winds of average force 11 obtained during the morning. The wind and weather slightly moderated during the afternoon, but violent squalls continued to come up from the south-west, bringing very heavy rain.

The Pemba, 100 miles to the S. E. of the Commillah, experienced a fierce gale with hard squalls blowing with hurricane violence. No improvement occurred in the weather until late in the evening, when the sky began to clear and the sea to moderate a little.

The Star of Albion and the Scottish Chieftain experienced similar weather. The log of the Saint Magnus (in Lat. 19° 58′ N. Long. 88° 28′ E. at noon) describes the weather in the morning as a heavy gale with terrific gusts and continued heavy rain. The Captain of the British Princess (in Lat. 20° 24′ N. and Long. 88° 42′ E. at noon) notes that the wind decreased from force 11 in the morning to force 9 in the evening, and that torrents of rain fell during the morning. The wind blew steadily from the south-west quarter, and brought up a very high sea.

The Captain of the Comet speaks as follows of the weather on the 29th: "Weather was very threatening. A heavy sea came up from the south-east; the wind was very variable, shifting all round the compass. Rain squalls frequently came up. At midnight it was blowing a furious gale."

The Captain of the Meteor remarks of the weather he experienced during the day: "The sea was very rough and a high squall from south-west came up at 8 A. M. Frequent heavy rain-squalls passed over the vessel. The wind shifted to south-west at 10·30 A. M. The barometer began to rise at 2 P. M. During the evening a strong south-west gale blew, and frequent terrific rain-squalls passed over the vessel. At 11 P. M. the wind began to decrease in force and the squalls were less frequent."

30th June.—The depression off the mouth of the Hooghly on the 29th had travelled in a westerly direction, crossed the coast near Balasore, and passed westward to the north of Cuttack.

The depression was apparently smaller than on the previous day, the lowest recorded reading of the barometer at 10 A. M. being 29·35". It was, however, a well-marked depression of about a quarter of an inch at the centre. The westward motion of the disturbance caused the barometer to fall briskly at Cuttack and in the adjacent districts of Chutia Nagpore and the Central Provinces, whilst, over the whole of Bengal, a very rapid recovery of pressure occurred. The wind directions in North-Eastern India indicated the continuance of cyclonic circulation in Bengal, Orissa, the Central Provinces, and Chutia Nagpore. Winds were from west in Orissa, south to east in Bengal, north in Chutia Nagpore, and north-west in the Central Provinces.

In other parts of India, the barometer rose generally during the preceding 24 hours. The changes over the greater part of the North Western Provinces and Bombay slightly exceeded a tenth of an inch, but the relative distribution of pressure was unaltered, except in Bengal and Orissa. The wind on the Bombay Coast had veered again to south-west, and was moderating. Very cloudy skies prevailed over the whole of Northern India. Heavy rain showers had fallen in the North-Western Provinces, and diminished the temperature over a large portion of Upper India from 10° to 15°.

Heavy rain continued to fall in connection with the cyclonic vortex in Orissa and the western districts of the Central Provinces.

The preceding remarks are illustrated by the following observations:—

Stations.	Barometer at 10 A. M. reduced to sea level.	Change since 10 A. M. previous day.	Wind.		Wind velocity in miles per hour since 10 A. M. previous day.	Percentage wind.	Cloud 10 A. M.	Rainfall at 10 A. M. of preceding 24 hours.
			10 h.	16 h.				
Nancowry	29·912	— ·002	S. W.	S. S. W.	10	91	8	...
Port Blair	29·846	— ·029	S. W.	S. W.	12	109	4	...
Diamond Island ...	29·832	— ·003	S. S. W.	S. W.	9	113	5	...
Akyab	29·776	+ ·081	S. S. E.	S.	7	175	7	2·75
Chittagong	29·758	+ ·150	E.	E.	9	129	10	2·25
Dacca.....	29 684	+ ·154	S. E.	S.	12	150	10	0·24
Jessore	29·645	+ ·200	E. S. E.	S. E.	21	420	10	0·29
Calcutta (Alipore)	29·555	+ ·233	S. E.	S. S. E.	16	267	10	1·17
Saugor Island	29·517	+ ·344	S. E.	S. E.	19	136	10	0·36
Balasore	29·433	+ ·078	S.	?	14	?	10	7·37
Cuttack	29·382	— ·086	W.	W. N. W.	10	250	10	4·08
False Point	29·444	+ ·004	S.	S.	24	240	9	1·47
Vizagapatam.....	29·618	+ ·005	W.	W. by S.	6	150	10	...

The following observations taken at stations in and near the area of cyclonic disturbance on the morning (10 A. M.) of 30th June give data for the determination of the storm centre at that hour :—

Station.	Barometer at 10 A. M. reduced to sea level.	Change since 10 A. M. previous day.	Wind.		Cloud amount at 10 A. M.	Rainfall at 10 A. M. of preceding 24 hours.
			Direction 10 A. M.	Amount in miles per hour since 10 A. M. previous day.		
Saugor Island	29.517	+ ·344	S. E.	19·0	10	0·36
Calcutta.....	29·556	+ ·233	S. E.	16·0	10	1·17
Burdwan	29·546	+ ·121	E.	12·0	10	0·88
Hazaribagh	29·518	— ·027	E. N. E.	18·0	10	0·38
Jubbulpore	29·686	+ ·042	W. N. W.	6·0	10	0·45
Seoni.....	29·665	+ ·002	N. W.	5·0	6	0·45
Nagpur	29·674	+ ·017	N. W.	9·0	10	...
Raipore.....	29·512	— ·087	W.	20·8	10	1·28
Sambalpore	29·353	— ·111	S. W.	3·3	10	4·74
Cuttack.....	29·382	— ·086	W.	10·0	10	4·08
False Point	29·444	+ ·004	S.	24·0	9	1·47

The observations indicate that the cyclonic area extended over Orissa and the north-eastern districts of the Central Provinces, and that the centre was in the neighbourhood of Sambalpore and to the north-west. The probable position of the centre at 10 A. M. was Lat. 21° 45′ N. and Long. 83° 50′ E.; and the barometric height there was almost certainly not lower than 29·3″. It had consequently crossed over the Northern Orissa Hills (in the Hill States of Morbhanj, Keunjhar, and Pal Lahara), the average height of which appear to be about 2000 ft., and the highest points of which slightly exceed 3,500 ft. This area is described in the following language by Dr. Hunter in his Statistical Account of the Orissa States:—"From the north bank of the Mahanadi, the ranges tower into a fine watershed, from 2000 to 2500 feet high, running north-west and south-east, and forming the boundary of the States of Nursingpore and Baramba. On the other side, they slope down upon the States of Hindol and Dhenkanal supplying countless little feeders to the Brahmani, which occupies the second of the three valleys. From the north bank of this river, the hills again roll back into magnificent ranges, running in the same general direction as before, but more confused and wilder, till they rise into the Keunjhar watershed, with peaks from 2500 to 3500 feet high, culminating in Malayagiri, 3,895 feet high, in the State of Pal Lahara. This watershed, in turn, slopes down into the third valley, that of the Baitarani, from whose eastern or left bank rise the hitherto almost unexplored mountains of Morbhanj, heaped upon each other in noble masses of rock, from 3,000 to nearly 4,000 feet high, sending countless tributaries to the Baitarani on the south, and pouring down the Burabalang, with the feeders of the Subarnarekha, on the north. The peaks are densely wooded to the summit, and, except at the regular passes, are inaccessible to beasts of burden. The intermediate valleys yield rich crops in return for negligent cultivation; and a vast quantity of land might be reclaimed on their outskirts and lower slopes."

Hence, during the interval between 4 P. M. of the 29th and 10 A. M. of the 30th, the centre of the storm had crossed the Balasore coast, been transferred across the very broken and elevated ground of the North Orissa Hills, and was at 10 A. M. of the 30th in the direct line of its advance previous to crossing the hills. What actions occurred during its passage across this hilly country are unknown, but it is certain that they produced no appreciable resultant effect on the line of motion of the vortex, and only a very moderate one on the depression at the centre. This was 29·3″ at 10 A. M. of the 30th, as compared with 29·14″ at 10 A. M. of the 29th. There can be little doubt that the effect of the irregular character of the country would be to break up and disintegrate the cyclonic or rotatory motion in the lower atmospheric strata, or to dimi-

nish as a whole the intensity and amount of the cyclonic motion, and, therefore, also of the depression at the centre, which roughly measures the intensity of the disturbance.

The observations taken at 4 P. M. in the neighbourhood of the centre are given in the following table :—

Station.	Barometer at 4 P. M. reduced to sea level.	Change since 4 P. M. previous day.	Wind.		Cloud amount at 4 P. M.
			Direction at 4 P. M.	Amount in miles per hour since 10 A. M.	
Saugor Island	29·508	+ ·371	S. E.	20·0	10
Burdwan	·516	+ ·172	S. E.	12·0	9
Hazaribagh	·446	— ·001	E.	22·9	10
Sutna	·533	+ ·013	E. N. E.	24·5	6
Jubbulpore	·538	— ·033	N. W.	24·8	10
Seoni	·543	— ·038	W. N. W.	24·4	5
Nagpur	·546	+ ·007	N. W.	12·2	10
Raipore	·415	— ·084	W.	60·0	10
Sambalpore	·215	— ·122	S. W.	1·5	10
Cuttack	·395	+ ·029	W. N. W.	65·0	10

In comparing these observations with the preceding 10 A. M. observations, it should be remembered that the fall of the barometer between 10 A. M. and 4 P. M., due to the diurnal oscillation, is ·11″ during the months of June and July in the Central Provinces. Hence, making allowance for this, it will be seen that the barometric changes due to the storm were of the following character. Pressure had increased about ·08″ at Cuttack and ·11″ at Hazaribagh, and had fallen ·03″ at Sambalpore. It had, consequently, risen during the previous six hours at all stations in the immediate neighbourhood of its centre, except Sambalpore, the nearest station. These facts appear to establish in this case that which I believe, from an examination of other similar cyclonic disturbances, to be a general result of the advance of a storm over a hilly country, *viz.*, that the storm tends to break up, the cyclonic motion becoming more irregular, and the barometric depression smaller in amount over the greater part, if not the whole, of the area of cyclonic circulation, but fre-

quently extending over a larger area. In other words, the cyclonic action becomes less intense and more diffuse, which is probably the first step in the disintegration of cyclonic disturbances. On the other hand, if, after its passage across hills, it receives increased energy and again intensifies, this is usually indicated by a contraction of the storm area, and by an increase of the depression near the centre.

The position of the centre at 4 P. M. was apparently almost identical with that in which it had been at 10 A. M., and was, so far as can be inferred from the observations, in Lat. 21° 50′ N. and Long. 83° 30′ E., or about 20 miles to the west of its position at 10 A. M.

The rainfall during the previous 24 hours in Orissa and Chutia Nagpur is given in the following table:—

Division.	Districts.	Average rainfall of district.	Highest rainfall in district.
Orissa	Pooree	1·83	3·88
	Cuttack	2·07	3·21
	Balasore	3·02	5·64
Chhattisgarh	Bilaspore	0·51	2·54
	Sambalpore	1·17	4·08
	Raipore	1·30	2·03
Nagpur	Wardha	1·82	2·71
	Bhundara	2·71	4·54
	Balaghat	0·03	0·10
	Nagpur	nil.	nil.
Jubbulpore	Jubbulpore	0·54	0·65
	Seoni	0·73	2·09
	Mandla	0·26	1·81
	Damoh	0·26	0·90
	Saugor	0·03	0·11
Nerbudda	Narsinghpore	0·88	3·00
	Chhindwara	1·03	4·09
	Betul	0·43	2·83
	Hoshangabad	0·01	0·05
	Nimar	nil.	nil.

The meteorological information extracted from the logs of vessels at the Head of the Bay on the 30th is given to show the improvement in the weather, and the establishment of southerly winds over the Head of the Bay.

30th June 1883.

Vessel.	Hour.	Latitude. N.	Longitude. E.	Probable reduced barometer.	Wind.		Remarks.
					Dir.	Force.	
Bancoora ..	4 A. M.			29·552	S. W.	5	Strong wind and overcast.
	8 A. M.			·539	S. W.	3	Moderate breeze and fine throughout.
	Noon	20° 01′	88° 25′	·542	S. W.	3	Do. do. do.
	4 P. M.			·638	S.	3	Current 80 miles adverse.
	8 P. M.			·539	S.	3	Moderate breeze and fine.
	Midnt.			·552	S.	3	Moderate and fine at Saugor.
Star of Albion ...	4 A. M.			29·540			Gale moderating, weather finer and less sea.
	8 A. M.			·570			
	Noon	20° 15′	87° 28′	·610	S. S. W.	6 to 4	
	4 P. M.			·620	S.		
	8 P. M.			·670			Latter part much finer.
	Midnt.			·670			
Saint Magnus	4 A. M.			29·440	S. S. W.	8	Squally rainy weather, heavy sea.
	8 A. M.			·490	S. S. W.	7	Do. do. do.
	Noon	20° 32′	87° 56′	·470	S. S. W.	6	Strong breeze, cloudy hazy weather.
	4 P. M.			·490	S.	5	Cloudy rainy weather, nasty sea.
	8 P. M.			·570	S.	4	Moderate and fine.
Scottish Chieftain	4 A. M.			29·450	S. W.	5	Weather having a much finer look, and barometer rising, are proofs that the strong winds are now over.
	8 A. M.	20° 50′		·500		4	
	Noon	20° 32′	87° 34′	·430		3	
	4 P. M.			·580		1	A very strong westerly current.
	8 P. M.			·620		1	
	Midnt.			·680			
Pemba ...	4 A. M.			29·490	S. W.	6	A. M. Strong breeze, sea going down.
	8 A. M.			·540	...	6	
	Noon	20° 33′	88° 31′	·540	...	5	Noon. Moderate breeze and clear.
	4 P. M.			·520	...	5	3-45 P. M. Passed E. Channel Light Vessel,
	8 P. M.			·580	...	5	8 P. M. Anchored in Saugor Roads.
	Midnt.			·600	...	5	

Vessel.	Hour.	Latitude. N.	Longitude. E.	Probable reduced barometer.	Wind. Dir.	Wind. Force.	Remarks.
British Princess	4 A.M.					9	Squally with rain.
	8 A.M.					9	Sea very high.
	Noon	20° 33′	88° 19′			8	Sea very high.
	4 P.M.					8	
	8 P.M.					6	Sea very high.
	Midnt.					5	High confused sea.
Prince Amadeo	4 A.M.				S. S. W.	10	Midnight. Gale breaking.
	Noon	20° 39′	88° 20′	29·530	S.	8	
	8 P.M.					5	4 A.M. Strong S. S. W., occasional heavy squalls.
	Midnt.					5	
							Noon. Strong wind S., weather finer.
Commillah	4 A.M.			29·349	S. W.	9	A.M. Hard squalls and heavy rain and high sea, stood to southward. A very high sea running from S. W. 5 A.M. Stood up to Northward. Weather clearing at times for observations. 8 A.M. Hard squalls from S. W. and high sea. Noon. Overcast, weather hazy. 4 P.M. Fine weather.
	8 A.M.			·423	S. S. W.	8	
	Noon			·434	S. S. W.	7	
	4 P.M.			·401	S. W.	5	
	8 P.M.			·464	Var.	4	
	Midnt.			·569	E. S. E.	3	

The preceding observations call for little remark. They show that south-westerly winds were fully established over the whole of the north of the Bay, but that they were diminishing rapidly in force. Before sunset, moderate breezes and finer weather had set in. Heavy squalls came up during the early part of the day, but the only vessel which reports rain during the afternoon was the Saint Magnus. In her case, however, it is stated that the weather improved rapidly and was fine, with moderate winds, at 8 P.M. Hence, the stormy weather in the Bay ceased about noon of the 30th. A heavy swell continued to run for some little time afterwards, and strong westerly winds prevailed for the next 24 hours.

July 1st.—The following table gives the observations taken at a few of the most important stations, and indicates the general character of the weather over India on the morning of the 1st :—

Station.	Barometer at 10 A. M. reduced to sea level.	Change since 10 A. M. previous day.	Wind.		Cloud amount at 10 A. M.	Rainfall at 10 A.M. preceding 24 hours.	Weather.
			Direction. 10 A. M.	Amount in miles per hour since 10 A.M. previous day.			
Calcutta.....	29·676	+ ·121	S. E.	7	8	0·29	Fine.
Allahabad.....	·566	— ·070	E. N. E.	8	10	...	Strong wind.
Lahore	·701	+ ·212	N.	3	8	0·77	Dark, gloomy.
Kurrachee.....	·642	+ ·057	W. S. W.	17	9	0·17	Sultry.
Bombay	·765	— ·010	W.	17	10	0·21	Showery.
Jeypore.....	·678	+ ·032	N.	5	7	0·74	Showery.
Nagpur	·471	— ·203	W.	11	10	4·08	Continuous rain.
Madras	·775	— ·038	W.	8	6	...	Fine.
Bangalore.....	·803	— ·042	S. W.	11	5	...	Fine.

The observations of the 1st indicate that the barometric depression moved during that day in the same direction as hitherto and at a rate of about 15 miles per hour. The westward motion of the depression had caused a fall of nearly two-tenths of an inch in the barometer over the greater part of the Central Provinces, and a general, although a slight, decrease over the whole of the Peninsula and Bombay. In Bengal, the rapid recovery in progress on the 30th continued. A rapid rise had also occurred over the Punjab and the western districts of the North Western Provinces, due to some other and independent action. A very distinct circulation of the air was shown round the centre of depression. In the mid-Gangetic valley, the winds had drawn round to north-east, and, over the western portions of the Central Provinces, they were blowing from north-west. Moderately strong winds continued at the Head of the Bay and in South Bengal. No change of importance had occurred in the wind directions over Bombay and the south of the Peninsula. Strong west winds prevailed along the Bombay coast, where, however, little or no rain was falling. Local winds obtained in the Punjab. The sky was less clouded, the weather finer, and rainfall less in amount over the Gangetic delta and valley. The depression was, however, giving very heavy rain to the Central Provinces, where the sky was overcast. Over the remainder of the country, the weather was of the usual monsoon character.

The storm had advanced through the Chhatisgarh division of the Central Provinces (which includes the Sambalpore, Bilaspore, and Raipore districts), and was now passing through the Jubbulpore and Nagpur divisions.

The following table gives the 10 A. M. observations at the stations in the neighbourhood of the centre at that hour:—

Station.	Barometer at 10 A. M. reduced to sea level.	Change since 10 A. M. previous day.	Wind.		Cloud amount at 10 A. M.	Rainfall at 10 A. M. of preceding 24 hours.	Weather.
			Direction at 10 A. M.	Amount in miles per hour since 10 A. M. previous day.			
Sambalpore ...	29·526	+ ·173	S. W.	1·4	6	1·84	
Raipore	·535	+ ·024	S. W.	20·0	10	...	Overcast.
Hazaribagh ...	·627	+ ·109	E. S. E.	20·0	8	0·34	Gale of wind.
Sutna.....	·534	— ·090	E.	21·0	10	0·08	Ditto.
Seoni	·463	— ·202	N. N. W.	15·0	10	4·60	Continuous rain.
Jubbulpore ...	·483	— ·204	N. N. E.	8·0	10	1·82	Moist & muggy.
Nagpur	·471	— ·203	W.	11·0	10	4·08	

The number of observatories in Chutia Nagpore and the north-eastern districts of the Central Provinces is very small for their extent. Hence, it is not possible to state with approximate exactness the position of the centre of the depression at this time.

The observations, however, indicate that the centre was to the east of Seoni, and that it was at nearly equal distances from Jubbulpore, Seoni, and Nagpore, and hence almost certainly in Lat. 22° N. and Long. 81° E.

The following table gives the observations at 4 P. M. for the determination of the position of the centre at that hour :—

Station.	Barometer at 4 P. M. reduced to sea level.	Change since 4 P. M. previous day.	Wind.		Cloud amount at 4 P. M.	Weather.
			Direction at 4 P. M.	Amount in miles per hour since 10 A. M.		
Nagpur	29·355	— ·191	W.	11·7	10	Overcast.
Raipore	·415	— 0	S. W.	64·1	10	Overcast.
Seoni	·323	— ·220	E.	9·2	10	Overcast, raining.
Sutna.....	·435	— ·098	E.	30·0	7	
Jubbulpore	·375	— ·163	E. N. E.	14·2	10	Gloomy.
Sangor	·412	— ·178	N. W.	2·3	8	
Hoshangabad ...	·420	— ·153	W. S. W.	2·8	10	Overcast.
Khandwa	·478	— ·132	W. N. W.	20·1	10	Raining.
Akola.....	·509	— ·091	W. N. W.	21·0	10	Overcast.
Indore	·533	— ·073	W. N. W.	15·0	10	Overcast.

Allowing for the amount of the fall of the barometer between 10 A. M. and 4 P. M. due to the diurnal oscillation, the barometer had risen at Sambalpore ·11″, and had also risen at Akola ·02″. The only portion of the area in which it had fallen was that represented by the station of Seoni, where it had fallen ·03″.

The wind directions at Seoni and Nagpore were east and west respectively, and indicate that the centre was between these two stations, and probably some little distance to the east of the line joining them. Its probable position was hence in Lat. 22° N. and Long. 79° 45′ E.

The following table gives the average rainfall during the previous 24 hours in every district of Orissa and the Central Provinces :—

Division.	District.	Average rainfall of district.	Highest in district.
Orissa	Pooree	0.01	0.05
	Cuttack	nil.	nil.
	Balasore	0·09	0·20
Chattisgarh	Sambalpore	1·05	5·25
	Raipore	1·60	4·25
	Bilaspore	0·56	2·92
Nagpore	Bandhara	2·97	4·36
	Balaghat	2·47	5·00
	Nagpore	3·88	4·80
	Wardha	1·91	4·18
Jubbulpore	Jubbulpore	0·66	1·62
	Seoni	2·76	5·65
	Mandla	0·02	0·15
	Damoh	0·27	0·80
	Saugor	0·28	0·48
Nerbudda	Nursinghpore	0·53	1·25
	Chhindwara	4·16	4·90
	Betul	3·91	6·13
	Hoshangabad	2·90	5·99
	Nimar	0·64	1·01

This table indicates that rain had practically ceased to fall in Orissa, and that moderate rain had fallen in Chattisgarh. Heavy rain had been received in all districts of the Central Provinces through which the cyclone passed during the day, namely, the Seoni, Chhindwara, and Hoshang-

abad districts, and also in the districts to the south of the line of motion; whilst in the districts to the north the rainfall was light.

The following table shews that the amount of rain in Bengal was very small:—

Districts.	Average rainfall of district.	Highest in district.
Orissa	0.04	0·20
South West Bengal	0·12	0·96
East Bengal	0·09	0·50
North Bengal	0·08	1·37
North Behar	nil.	0·07
South Behar	0.05	0·80
Chutia Nagpore	0·11	0·46

2nd July.—The following table gives the 10 A. M. observations of this day at the nine most important observatories in India.

Stations.	Barometer at 10 A. M. reduced to sea level.	Change since 10 A. M. previous day.	Wind.		Cloud amount at 10 A. M.	Rainfall at 10 A. M. of preceding 24 hours.	Weather.
			Direction. 10 h.	Amount in miles per hour since 10 A. M. previous day.			
Calcutta	29·673	— ·003	S. W.	4	8	0·03	Fine.
Allahabad	·613	+ ·047	E.	8	2	0·04	Strong wind.
Lahore	·590	— ·111	W.	2	5	...	Fine.
Kurrachee	·556	— ·086	N. W.	18	2	...	Fine.
Bombay	·708	— ·057	W. S. W.	20	10	0·15	Showery.
Jeypore	·541	— ·137	E. S. E.	7	6	...	Fine.
Nagpore	·621	+ ·150	S. W.	18	10	3·22	Strong wind.
Madras	·795	+ ·020	W.	6	7	1·83	Thunder storm.
Bangalore	·794	— ·009	W. S. W.	10	6	...	Fine.

The observations taken throughout India shew that the barometric depression had continued to travel westward in the same general direction as during the previous two days, and with the same velocity approximately as during the afternoon of the 1st. A rapid recovery of pressure had occurred over the greater part of the Central Provinces, amounting at several stations to ·15′. The barometer had on the other hand fallen over the districts towards which the centre was advancing. The fall was greatest at Indore, where it slightly exceeded ·25″ since 10 A. M. of the 1st. Pressure had decreased over the whole of the Punjab, the North-Western Provinces, Bombay, and the greater part of Bengal and Burmah. This fall was due to general actions unconnected with the continuance of the depression in Western India.

The general character of the air motion remained the same, except in the neighbourhood of the moving area of depression. Southerly winds now prevailed in the Central Provinces. The westerly winds on the Bombay coast were slightly stronger than they had been on the previous day. The easterly winds prevalent over the area to the north and north-east of the storm centre were comparatively dry, and little or no rain fell in that part of the depression where they were blowing. The rainfall was heavy in the southern quadrant of the disturbance.

Little or no rain was falling at the time in Assam, North Bengal, Behar, the North-Western Provinces, the Punjab, and over the greater part of Bombay.

During the interval between 4 P. M. of the 1st and 10 A. M. of the 2nd, the centre continued to advance in a general westerly direction through the Narbadda Division of the Central Provinces.

The following are the observations taken at the meteorological stations in the area of depression at 10 A. M. of the 2nd.

Stations.	Barometer at 10 A. M. reduced to sea level.	Change since 10 A. M. previous day.	Wind.		Cloud amount at 10 A. M.	Rainfall at 10 A. M. preceding 24 hours.	Weather
			Direction at 10 A. M.	Amount in miles per hour since 10 A.M. previous day.			
Saugor	29·488	— ·056	N. E.	11·0	8	0·38	Showery.
Akola.....	·577	— ·061	W.	22·0	10	7·43	Continuous rain.
Amraoti.....	·553	— ·050	W. S. W.	42·0	9	6·35	Ditto.
Neemuch	·509	— ·154	E. N. E.	20·0	10	0.86	Showery.
Indore	·410	— ·259	N. E.	13·0	10	1·58	Showery.
Jeypore	·541	— ·137	E. S. E.	7·0	6	...	Fine.
Ajmere	·546	— ·140	N. E.	5·0	4	0·43	Thunder.
Khandwa	·494	— ·141	W. S. W.	13·0	10	2·64	Continuous rain.
Mount Abu ...	25·692	— ·169	N.	9·0	9	3·34	Ditto.
Surat	29·588	— ·138	S. W.	17·0	10	0·33	Showery.
Malagaon	·670	— ·073	W.	18·0	10	2·83	Continuous rain.
Nagpore	·621	+ ·150	S. W.	18·0	10	3·22	Strong wind.
Seoni	·603	+ ·140	S.	12·0	8	1·20	Continuous rain.
Jubbulpore ...	·599	+ ·116	S.	12·0	9	0·05	Strong wind.

The barometer was lowest at Indore. The barometric heights and wind directions, when charted, indicate that the centre of the depression was at noon very near Indore and to the east of it, and hence in Lat. 22½° N. and Long. 76° E. Strong winds and very heavy rain characterized the western and southern quadrants. In the northern quadrant, winds were much more moderate, and rain fell only near the centre of the depression.

The following are the 4 P. M. observations, which enable the position of the depression and its centre to be determined at that hour:—

Station.	Barometer at 4 P. M. reduced to sea level.	Change since 4 P. M. previous day.	Wind.		Cloud amount at 4 P. M.	Weather.
			Direction at 4 P. M.	Amount in miles per hour since 10 A. M.		
Saugor	29·473	+ ·061	S.	14·0	8	Cloudy.
Akola.....	·529	+ ·020	W. S. W.	21·7	10	Strong wind.
Amraoti.....	·565	+ ·136	S. W.	23·3	10	Strong wind.
Neemuch	·368	— ·148	E.	11·7	9	
Indore	·414	— ·119	S. W.	8·7	10	Overcast.
Jeypore	·398	— ·125	E.	10·9	7	Strong wind.
Ajmere	·399	— ·183	E.	12·4	5	
Khandwa	·444	— ·034	W.	17·6	10	
Surat	·495	— ·135	W. S. W.	33·0	10	Overcast.
Malegaon	·557	— ·050	W.	19·8	10	Strong wind.
Deesa.....	·370	— ·166	W.	18·0	10	Overcast.
Rajkot	·458	— ·131	W.	20·3	10	Strong wind.
Bhuj	·422	— ·151	W.	15·8	8	Strong wind.
Hyderabad	·422	— ·175	S. W.	5·0	9	Overcast.

Allowing for the amount of the diurnal oscillation between 10 A. M. and 4 P. M., it will be seen that the barometer had fallen during the preceding six hours at Neemuch, Ajmere, and Deesa, whilst it had risen rapidly in the Central Provinces. The centre was between Neemuch and Deesa, where the barometric heights were practically the same, and winds were in opposite directions. It was approximately in Lat. 23° 30′ N. and Long. 74° 30′ E.

The following table gives the rainfall in each district of the Central Provinces during the 24 hours preceding 6 P. M. of the 2nd.

Division.	District.	Average Rainfall of district.	Highest in district.
Chattisgarh	Sambalpore	0·09	0·45
	Raipore	nil.	nil.
	Bilaspore	0·05	0·20
Nagpur	Bhandara	0·25	0·70
	Balaghat	0·71	1·90
	Nagpur	2·25	3·86
	Wardha	nil.	nil.
Jubbulpore	Jubbulpore	0·02	0·05
	Seoni	0·06	0·17
	Mandla	nil.	nil.
	Damoh	0·07	0·20
	Saugor	0·10	0·41
Narbudda	Narsinghpore	0·19	0·75
	Chhindwara	0·06	0·19
	Betul	0·91	2·45
	Hoshangabad	0·96	3·35
	Nimar	5·62	8·20

The rainfall of the previous 24 hours was small in amount. The Nagpur district received local heavy rainfall. The only district where the rainfall due to the cyclonic disturbance was large in amount was the Nimar district. It was in the southern quadrant of the storm area during the greater part of the day, and received an average of 5·62 inches.

3rd July.—The following table gives the observations for the 3rd July at the chief meteorological stations in India :—

Station.	Barometer at 10 A. M. reduced to sea level.	Change since 10 A. M. previous day.	Wind.		Cloud amount at 10 A. M.	Rainfall at 10 A.M. of preceding 24 hours.	Weather.
			Direction. 10 h.	Amount in miles per hour since 10 A.M. previous day.			
Calcutta	29·685	+ ·012	E. S. E.	3	9	nil.	Fine.
Allahabad	·712	+ ·099	N.	4	4	nil.	Fine.
Lahore	·613	+ ·023	E.	1	5	nil.	Fine.
Kurrachee	·446	— ·110	N. N. W.	18	9	0·05	Gloomy.
Bombay	·732	+ ·024	S. S. W.	25	10	0·21	Gale of wind.
Jeypore	·664	+ ·123	S. S. W.	12	8	nil.	Strong wind.
Nagpur	·760	+ ·139	S. S. W.	6	5	0·04	Showery.
Madras	·845	+ ·050	S. W.	6	5	0·11	Showery.
Bangalore	·854	+ ·060	S. W.	8	5	nil.	Fine.

The depression was now in the immediate neighbourhood of the Arabian Sea, between Kurrachee and Rajkot. The barometer during the previous 24 hours had fallen between ·1″ and ·15″ in Sind, Cutch, Guzerat, and the adjacent districts of Rajputana. In the rear of the disturbance, over the Central Provinces, the Berars, and Central India, a recovery of pressure, varying in amount between ·15″ and ·25″, had occurred. Over the remainder of India, pressure had increased briskly. The depression in Cutch and Guzerat had consequently been emphasized by these changes, and the baric gradients over the area of depression were large. South-westerly gales were now blowing on the west coast, from Bombay northwards, and were giving very heavy rain over the southern and eastern portions of the depression. Over Northern India, the winds varied considerably in direction and were light and unsteady. The weather was cloudy, and light and partial rain was falling, over the greater part of Northern India, except the Punjab and parts of the North-Western Provinces.

The centre of the depression at 4 P. M. on the 2nd was to the west of Neemuch in the Indore State, and was advancing westwards into Guzerat. The following table gives the 10 A. M. observations of the 3rd at the stations in the area of cyclonic disturbance :—

Stations.	Barometer at 10 A. M. reduced to sea level.	Change since 10 A. M. previous day.	Wind.		Cloud amount at 10 A. M.	Rain at 10 A. M. preceding 24 hours.	Weather.
			Direction at 10 A. M.	Amount in miles per hour since 10 A. M. previous day.			
Kurrachee.....	29·446	—·110	N. N. W.	18·0	9	0·05	Gloomy.
Rajkote	29·435	—·171	S. W.	33·0	10	9·85	Dust storm with rain.
Deesa.....	29·467	—·076	S. E.	17·0	10	0·43	Threatening weather.
Ajmere	29·636	+·090	S. E.	11·0	9	0·10	Strong wind.
Indore	29·676	+·266	S. E.	7·0	6	0·10	Gloomy.
Neemuch	29·639	+·130	S. S. W.	22·0	10	0·21	Thunder and lightning at distance.
Bhuj	29·326	—·207	N. N. W.	3·0	10	0·76	Fine.
Hyderabad ...	29·420	—·137	N.	5·0	8	0·26	Strong wind.

The barometer had risen rapidly at Indore and Neemuch, whilst it had fallen somewhat less rapidly at Bhuj, Rajkote, Deesa, Hyderabad, and Kurrachee. The preceding observations indicate that the centre

was between the three stations of Bhuj, Rajkote, and Deesa, and probably not far from the first-named station, in Lat. 23½° N. and Long. 69¾° E., and hence nearly in the centre of the district of Cutch. The observations show that winds were unusually light in the north-western quadrant. The average wind velocity at Bhuj during the previous 24 hours was only 3 miles, and at Hyderabad 5 miles. The westerly and south-westerly winds at Rajkote and other stations in the easterly and southerly quadrants contrast strikingly with the feeble winds to the north of the centre of the depression.

The following are the 4 P. M. observations taken at the stations within the storm area:—

Stations.	Barometer at 4 P. M. reduced to sea level.	Change since 4 P. M. previous day.	Wind.		Cloud amount at 4 P. M.	Weather.
			Direction at 4 P. M.	Amount in miles per hour since 10 A. M.		
Kurrachee.....	29·304	—·182	N. N. W.	16·8.	10	Strong wind.
Rajkote.....	29·454	—·004	S. S. W.	32·3	10	Strong wind.
Mount Abu ...	25·598	+·042	S.	13·8	10	Gloomy.
Ajmere	29·565	+·166	W.	12·2	5	Gloomy.
Indore	29·627	+·213	S.	6·7	10	Gloomy.
Neemuch	29·587	+·219	S. S. W.	11·2	10	Gloomy.
Bhuj	29·215	—·207	S.	25·7	10	Thunderstorm.
Hyderabad ...	29·317	—·105	E. N. E.	58·8	6	Strong wind.
Jacobabad.....	29·382	—·066	E.	17·2	6	Strong wind.
Multan	29·481	+·021	N. E.	3·0	4	Fine.

When the observations are charted, they indicate that the centre was between Bhuj and Kurrachee, where the barometric readings were lowest, and winds were from S. and N. N. W.; and at a short distance to the W. N. W. of the former station. Its probable position was in Lat. 23¾° N. and Long. 68¾° E. If allowance be made for the diurnal oscillation, it will be seen that the barometer had altered little at Bhuj, and was rising quickly at Rajkote, but continued to fall rather rapidly at Kurrachee.

The following table gives the average rainfall in the divisions of Bengal:—

	Average rainfall in previous 24 hours.	Highest rainfall in 24 hours.
Orissa	0·03	0·30
South West Bengal	0·04	0·52
East Bengal	0·12	1·40
North Bengal	0·04	0·56
North Behar	nil.	nil.
South Behar	0·03	0·40
Chutia Nagpur	0·06	0·50

The above return shews that, with the exception of a few local showers, rain had ceased in the Province of Bengal.

As daily returns of rainfall in Central India and the Bombay Presidency are not at my disposal, it is not possible to give full details of this element of observation for the previous 24 hours. The returns of Bhuj, Rajkote, Kurrachee, &c., however, indicate clearly that the rainfall was heavy over the southern half of the cyclonic area and light over the northern.

4th July.—The following are observations taken at 10 A. M. of the 4th, and illustrate the more important changes that had occurred during the previous 24 hours in the meteorology of India.

Stations.	Barometer at 10 A. M. reduced to sea level.	Change since 10 A. M. previous day.	Wind. Direction at 10 h.	Wind. Amount in miles per hour since 10 A. M. previous day.	Cloud amount at 10 A. M.	Rainfall at 10 A. M. preceding 24 hours.	Weather.
Calcutta ...	29·643	— ·042	N. W.	5	10	2·12	Gloomy.
Allahabad ...	29·669	— ·043	N. W.	2	5	...	Fine.
Lahore	29·652	+ ·039	Calm.	5	6	0·89	Fine.
Kurrachee...	29·380	— ·066	E.	33	10	0·83	Duststorm with rain.
Bombay.....	29·867	+ ·135	S.	28	10	0·23	Gale of wind.
Jeypore	29·751	+ ·087	W. N. W.	7	8	...	Fine.
Nagpore.....	29·811	+ ·051	W.	4	7	...	Fine.
Madras	29·864	+ ·019	W. S. W.	7	4	...	Fine.
Bangalore ...	29·901	+ ·047	W.	7	4	...	Fine.

The observations taken at the observing stations in Sind and Guzerat at 10 A. M. are given below. They shew that the whirl was still quite distinctly marked, that it continued to advance to the westward, and that it was now near the Head of the Arabian Sea, to the S. W. of Kurrachee. A rapid rise of the barometer had occurred over upper Sind and Guzerat. Kurrachee was the only station where pressure was lower than on the morning of the 3rd. South-westerly winds prevailed in Cutch and Guzerat. The wind had shifted round to east at Kurrachee, and was blowing with considerable force. It brought up a dust-storm from the Rajputana desert followed by rain.

The centre of the depression had crossed the Sind coast during the previous evening. It is not possible to follow its motion further, as no observations are available for this portion of its path. It is, however, probable that it speedily broke up.

The following 10 A. M. observations taken at stations in Western India nearest the area of cyclonic disturbance illustrate the previous remarks.

Station.	Barometer 10 A. M. reduced to sea level.	Change since 10 A. M. previous day.	Wind.		Cloud amount at 10 A. M.	Rainfall at 10 A. M. preceding 24 hours.	Weather.
			Direction at 10 A. M.	Amount in miles per hour since 10 A. M. previous day.			
Kurrachee...	29·380	—·066	E.	33·0	10	0·83	Duststorm with rain.
Mount Abu	25·890	+·221	S. S. W.	17·0	10	2·36	Passing showers.
Deesa.....	29·725	+·258	S.	?	10	0·39	Strong wind.
Rajkote	29·695	+·260	S. S. W.	24·0	10	0·58	Clouds low, moving rapidly with scuds.
Bhuj	29·583	+·257	S. S. W.	11·0	10	4·24	Continuous rain.
Hyderabad .	29·626	+·206	S. W.	240	10	0·05	Gale of wind.
Jacobabad...	29·614	+·132	E.	90	3	...	Fine weather with passing clouds.
Mooltan.....	29·648	+·073	S. W.	30	0	...	Fine weather with passing clouds.

The following 4 P. M. observations shew that the barometer was rising rapidly at Kurrachee, as well as at the neighbouring stations, and that the wind at that station was slowly shifting round to its normal direction (S. W.) in July. They indicate clearly the continued existence of the whirl at the head of the Arabian Sea.

Stations.	Barometer at 4 P. M. reduced to sea level.	Change since 4 P. M. previous day.	Wind.		Cloud amount at 4 P. M.	Weather.
			Direction at 4 P. M.	Amount in miles per hour since 10 A. M.		
Kurrachee.....	29·490	+ ·186	E. S. E.	38·7	10	Strong wind.
Mount Abu ...	25·856	+ ·258	S. S. W.	18·5	10	Gloomy.
Deesa.....	29·667	+ ·163	E. N. E.	?	10	Strong wind.
Rajkote.....	29·653	+ ·199	S. W.	28·7	8	Strong wind.
Bhuj	29·581	+ ·366	S. S. W.	23·0	10	Strong wind.

The history of the cyclone ends with the evening of the 4th, as the observations of the 5th and subsequent days shew that normal winds were established in Sind, and no further evidence of the existence of the cyclonic whirl is furnished by the land observations.

CHAPTER III.

Discussion of the more important features of the Storm of the 26th June to the 4th July, 1883.

The cyclonic storm of the last week of June and the first week of July is interesting in several respects. It occurred after the rains had fully set in over Bengal, and was of unusual intensity in the Bay for a storm of the rains. After it passed into the Central Provinces, it acquired fresh energy, and advanced slowly across the Head of the Peninsula into Guzerat. During this part of its motion, it gave excessive rain, and presented in a marked degree the phenomena of a south-west monsoon storm on land. It was thus one of the most complete storms of the rains that has occurred in recent years, and as such is deserving of careful study. Before discussing its more important features in detail, it appears desirable to give a brief connected history of the antecedents, the formation, the progress, and the dissolution of the storm.

The south-west monsoon proper of 1883 commenced a few days earlier than usual at the Head of the Bay and in Bengal. The Bombay branch of the monsoon current was first felt in force on the Bombay coast on the 24th and 25th of June, when strong winds, almost approaching to a gale, were blowing, and general rain began and extended to the Central Provinces. Very shortly after the commencement of the south-west

monsoon proper in Bengal, an atmospheric eddy, or cyclonic vortex, formed in the north-west angle of the Bay. It passed through North Orissa, Chutia Nagpore, and South Behar into North Behar, where it broke up on the 20th of June. This disturbance drew large supplies of vapour from the southerly current advancing into Bengal from the Bay, which it discharged as rain in unusually large amounts over a considerable portion of Central and North Behar, and thus occasioned very heavy floods in the Gya, Behar, Patna, Durbhanga, and Mozufferpore districts.

The disappearance of this eddy or whirl was followed by a partial break in the rains. The winds, although they continued to blow from the normal directions over Bengal and in the south and centre of the Bay, fell off in strength. The sky was less densely clouded, more especially in Central Bengal and Behar. The air also was drier, and the rainfall much smaller in amount and confined to local showers, which fell chiefly in the neighbourhood of the hills in North and East Bengal. Whilst this partial break in the rains (which commenced on the 20th) held in Bengal, the winds diminished in strength *pari passu* over the north of the Bay. They were light to moderate, and rarely exceeded force 3. The weather was comparatively fine, and the sea almost smooth.

The wind observations taken at Nancowry and Port Blair show that the south-westerly winds of the centre and south of the Bay, which had been very feeble from the 15th, began to increase in force on the 23rd, and blew strongly during the remainder of the month. This apparently indicated the commencement of another burst of the monsoon.

It appears to be a general rule that each strong advance of south-west monsoon winds and consequent influx of aqueous vapour into Bengal commences in the south of the Bay. The winds first strengthen for some days in that part of the Bay, as is proved by the wind observations at the Ceylon stations and at Nancowry in the Nicobars. The area of strong winds then extends northwards. When the advancing strong winds approach the Burmah and Bengal coasts, there is a strong tendency to eddying motion at and near the front. This incipient vorticose motion may, under favourable conditions, develop into a large cyclonic circulation and storm.

The strong current, in the present instance, advanced northwards along the Burmese and Arrakan coasts, and increased the strength of the winds at Diamond Island from the 25th, and at Akyab from the 26th. These may, therefore, be assumed as the dates of the arrival of the front of the advancing mass of air in the latitudes of these two stations. The log of the Pemba proves that, on the 27th, the force of the winds off the west Burmese coast was very considerable and averaged 9. At the same time that these strong winds were blowing off the Burmese coast, the winds at the Head of the Bay

were very light and variable, and of average force not exceeding 2. The strong advancing south-westerly current was opposed by the line of the Arrakan hills, by the resistances due to friction between itself and the earth's surface, and by the slower moving air currents to the west. The actual effect of the various resistances was to produce a deflection of the current to the west in the neighbourhood of the Burmese and Arrakan coasts, and a large amount of eddying or rotatory motion in the front of the current, and, therefore, also of ascensional motion and its concomitant action (in the case of a very humid current), rainfall. The energy or latent heat given out in the process of condensation, or rain formation, in its turn increased the ascensional motion, and the various actions and reactions gave rise to an extensive whirl near the Head of the Bay. The existence of this was plainly indicated on the morning of the 27th, when winds shifted round to north-east over the north-west of the Bay. Very heavy rain ("torrents of rain") were then falling over a comparatively small area near the Head of the Bay, which became an area of increasing barometric depression and of cyclonic air motion. The disturbance increased in intensity on the 28th and moved slowly westwards near the parallel of 21° N. At 10 A. M. of the 29th, the centre of the depression was between the Light Vessels at the Intermediate and Upper Gasper stations. It was then travelling with an average velocity of about 3 miles an hour. Its rate of motion apparently increased as it approached the Balasore coast.

The storm advanced in a general W. N. W. direction during the afternoon of the 29th, and crossed the Balasore coast a few miles to the north of the station of Balasore a little before midnight. It then apparently marched without change of direction across the North Orissa hills, as, next morning at 10 A. M., the centre of the barometric depression was near to Sambalpore and in the continuation of its line of its advance on the 29th. The disturbance apparently diminished for some time, but began to draw supplies of vapour from the Bombay branch of the monsoon current, which had been blowing strongly for some days previous. In consequence of the increased energy thus given to it, it again intensified slightly and moved almost due westward across the Head of the Peninsula at an average rate of about fifteen miles per hour. On the morning of the 1st, the centre was near Seoni, on the morning of the 2nd near Indore, and on the morning of the 3rd near Bhuj, whence it passed westwards across the coast into the Arabian Sea, and was a little to the south of Kurrachee on the evening of the 3rd. The wind directions at Kurrachee and the neighbouring stations indicated cyclonic indraught to a centre, to the south-west of Kurrachee on the morning of the 4th, after which they give no further indications of

its existence. In the absence of observations, it is impossible to state whether it broke up immediately, or passed over the whole breadth of the Arabian Sea.

The following table gives the positions of the centre at the hours stated, from the 27th of June to the date of its disappearance beyond the limits of India in the Arabian Sea:—

Date.	Hour.	Position of centre.		Distance travelled during preceding interval.	Rate of motion.
		Latitude. N.	Longitude. E.		
June 27th ...	Noon.	20° 30′	89° 45′		
	4 P. M.	20° 35′	89° 35′	12	3
June 28th ...	10 A. M.	21° 0′	88° 45′	62	$3\frac{1}{2}$
	Noon.	21° 3′	88° 40′	$6\frac{1}{2}$	$3\frac{1}{4}$
	4 P. M.	21° 10′	88° 30′	13	$3\frac{1}{4}$
June 29th ...	10 A. M.	21° 30′	87° 55′	45	$2\frac{1}{2}$
	Noon.	21° 30′	87° 50′	$5\frac{1}{2}$	$2\frac{3}{4}$
	4 P. M.	21° 35′	87° 30′	22	$5\frac{1}{2}$
June 30th ...	10 A. M.	22° 0′	84° 0′	230	13
	4 P. M.	22° 0′	83° 30′	32	$5\frac{1}{2}$
July 1st	10 A. M.	22° 0′	81° 0′	162	9
	4 P. M.	22° 0′	79° 45′	80	$13\frac{1}{3}$
July 2nd	10 A. M.	22° 30′	76° 0′	245	$13\frac{1}{2}$
	4 P. M.	23° 30′	74° 30′	120	20
July 3rd	10 A. M.	23° 30′	69° 45′	308	17
	4 P. M.	23° 45′	68° 45′	66	11

The atmospheric whirl was fully developed on the 27th and continued intact for at least seven days. During the latter part of its existence, it drifted across from the coast of Orissa to the coast of Cutch or Sind, and disappeared and probably broke up in the Arabian Sea.

The following table gives the lowest reading of the barometer at 10 A. M., the average barometric height at the same station, and the amount of the greatest known barometric depression at 10 A. M. on each day :—

		Lowest 10 A. M. barometric reading.	Average 10 A. M. barometric height. July 1st.	Depression.
June 29th..	Bay (Sandheads)	29·140	29·602	·462
June 30th..	Sambalpore	29·353	29·589	·236
July 1st ...	Seoni.....	29·463	29·624	·161
July 2nd...	Indore	29·410	29·662	·252
July 3rd ...	Bhuj	29·326	29·616	·290
July 4th ...	Kurrachee	29·380	29·589	·209

Hence the barometric depression at the Head of the Bay was very nearly half an inch. During its progress overland, the depression observed nowhere exceeded ·29″, and, as two of the stations named in the preceding table (Indore and Bhuj) were at a very short distance from the centre, it is almost certain that the barometric depression on land, after crossing the Orissa hills, never exceeded three-tenths of an inch. The decrease in the amount of the depression was evidently due to the greater frictional resistance encountered by the cyclonic disturbance on land than at sea.

An interesting feature of the storm was that its centre moved in a path which was approximately straight. The general direction of its path was N. 83° W. or almost due west.

The steady march in an almost constant direction across the Continent is very striking, when the varying character of the surface over which it passed is taken into consideration. During the first part of its existence, it passed slowly over the water surface at the Head of the Bay, where the resistance to its motion was a minimum. After crossing the Balasore coast, it advanced intact over the North Orissa hills, a very broken and irregular country, the highest points of which are from 3000 to 4000 ft. high. It then crossed the highlands of Sambalpore (where the hills which rise out from the plateau attain an elevation varying from 1,500 to 2,500 feet) and passed over the comparatively low plain of Chattisgarh, the average height of which is less than 1000 feet. Thence it advanced through the Balaghat, Seoni, Chhindwara, and Betul districts of the Central Provinces, which cover the extensive highlands known as

the Satpura plateau, and have an average height of 2000 feet. It thence passed across the valleys of the Taptee and Nerbudda and the Vindhya Hills into Indore and Malwa. The average elevation of the Vindhyas in that portion over which the cyclonic storm advanced is 2,500 feet. From Malwa, it passed westwards over the low plains of Guzerat and Cutch, the highest points of which do not exceed 800 or 900 feet in height, and crossed the coast of Sind between Bhuj and Kurrachee into the Arabian Sea, where its existence for at least twelve to eighteen hours afterwards is proved by the direction of the winds at Kurrachee and the neighbouring stations.

The above briefly indicates the varied character of the surface over which it advanced. During a considerable portion of its course on land, the average elevation of the country over which it travelled exceeded 2000 feet. Much of the ground was very broken and irregular country, the higher points of which exceeded 3000 feet in elevation. The only inference that can reasonably be drawn is that the cyclonic circulation extended to a height very considerably greater than 2000 or 3000 feet. Hence it was a cyclone of high elevation, and the cyclonic circulation near the earth's surface was of comparatively little importance, and not necessarily an index or measure of the intensity of the cyclone.

The chief features of the motion of the storm centre have already been indicated in the history of the cyclone. Its very slow motion during and for some time after its formation, or from noon of the 27th to noon of the 29th, is remarkable. During this interval of 48 hours, its rate of motion apparently never exceeded 5 miles per hour, and during the greater part of the period it varied between 2 and 4 miles. After noon of the 29th, it rapidly increased its speed, and, during the greater part of the next 24 hours, moved with a velocity varying between 10 and 15 miles. When the centre approached the high hills and broken ground of North Orissa, it experienced a very considerable retardation. As already stated (*vide* page 99), it lost energy and shewed signs of disintegration. The rainfall decreased in amount, the barometric depression was much smaller, and the disturbance was diffused over a larger area, although it was less regular and weaker in character. This was, however, followed by an increase of its energy due to its drawing supplies of vapour from the Bombay coast. The preceding changes were reversed. During this interval, the average rate of its motion was about 8 miles per hour. Its velocity increased on the 1st of July, and, during the remaining three days of its existence on land, it moved with a fairly uniform velocity of about 15 miles per hour.

Another important feature was the amount and distribution of the rainfall during the cyclonic storm. At the Head of the Bay, the rainfall

was torrential in character, more especially in the eastern and southern quadrants. The British Princess had "torrents of rain," the Saint Magnus "heavy continuous rain," the Star of Albion "thick continued rain," the Commillah "very heavy rain," and the Scottish Chieftain "heavy rain."

The following table gives the daily rainfalls during the period—June 28th to July 4th—at the meteorological stations situated in the area covered by the cyclonic storm during its existence on land :—

Stations.	June 1883.			July 1883.			
	28th.	29th.	30th.	1st.	2nd.	3rd.	4th.
Pooree	0·59	9·44	2·25	...	...	...	0·23
Saugor Island	...	0·17	0·36	...	...	1·08	3·82
Balasore	0·94	2·65	5·64	0·17	0·21	0·12	0·76
False Point	8·04	5·39	1·10	0·05	...	...	0·09
Cuttack	1·79	5·61	3·21	...	...	...	...
Sambalpore	0·05	2·47	7·00	1·84	...	...	0·80
Raipore	...	0·11	2·03	2·16	...	0·03	...
Nagpur	0·17	...	...	6·22	1·12	...	...
Seoni	1·22	0·45	...	5·65	0·17	...	...
Jubbulpore	0·12	0·12	0·65	1·62	0·05	0·06	...
Pachmarhi	1·29	...	0·02	5·99	1·36	...	0·05
Amraoti	0·85	...	...	4·60	3·65	...	...
Akola	0·42	...	...	2·17	6·85	0·03	...
Indore	0·07	...	...	1·01	0·89	0·02	...
Neemuch	0·04	...	1·47	0·86	0·21	0·09	...
Surat	3·64	3·51	0·52	0·11	1·78	3·76	0·35
Ahmedabad	0·18	0·05	...	...	0·76	3·88	0·79
Rajkote	...	0·46	...	0·13	...	10·05	0·40
Bhuj	0·90	0·54	0·02	...	0·48	3·78	1·56
Hyderabad	0·42	...	...	...	...	0·26	0·12
Karrachee	...	0·37	...	0·17	0·06	0·12	1·65
Deesa	1·23	0·08	0·03	...	1·84	0·03	0·74
Mount Abu	0·45	0·18	0·14	2·16	2·64	1·31	2·22
Ajmere	0·07	...	...	...	0·43	0·10	...

As the rainfall was especially heavy in Orissa and the Central Provinces, I give the following table shewing the average district rainfall for each day of the period (June 27th to July 3rd) in these two divisions of the Empire, and illustrating more fully than the previous statement the distribution of the rainfall in a portion of the area covered by the disturbance. As daily returns of rainfall in Central India and the Bombay Presidency are not at my disposal, I am not able to give the corresponding data for the western portion of the course of the cyclone.

Division.	District.	No. of Stations.	27th.	28th.	29th.	30th.	1st.	2nd.	3rd.	Total.
Orissa	Pooree	5	0·23	2·58	6·15	1·83	0·01	nil.	0·06	10·86
	Cuttack	5	0·06	3·03	4·50	2·07	nil.	nil.	nil.	9·66
	Balasore	6	0·71	2·00	2·66	3·02	0·09	0·09	0·13	8·70
Chhittasgarh	Sambalpore	5	0·32	0·31	0·74	1·17	1·05	0·09	0·01	3·69
	Raipore	4	1·74	nil	0·73	1·30	1·60	nil.	0·01	5·38
	Bilaspore	7	0·11	0·51	0·35	0·51	0·56	0·05	0·01	2·05
Nagpore	Nagpur	5	1·06	1·48	0·19	nil.	3·88	2·25	0·01	8·87
	Bhandara	3	2·81	0·57	0·04	2·71	2·99	0·25	0·05	9·42
	Wardha	4	1·29	0·01	nil.	1·82	1·91	nil.	0·01	5·04
	Balaghat	4	1·21	0·08	0·23	0·03	2·47	0·71	0·06	4·79
Jubbulpore	Jubbulpore	3	0·59	0·13	1·44	0·54	0·66	0·02	0·02	3·40
	Saugor	4	0·46	0·26	nil.	0·03	0·28	0·10	nil.	1·13
	Damoh	5	0·41	0·04	nil.	0·26	0·27	0·07	nil.	1·05
	Seoni	3	0·83	0·68	0·38	0·73	2·76	0·06	0·03	5·47
	Mandla	7	0·02	0·20	0·04	0·26	0·02	nil.	nil.	0·54
Nerbudda	Betul	7	0·55	0·19	0·12	0·43	3·91	0·91	0·04	6·15
	Chhindwara	3	1·15	0·37	nil.	1·03	4·16	0·06	nil.	6·77
	Hoshangabad	5	1·01	0·72	0·01	0·01	2·90	0·96	0·07	5·68
	Nursinghpore	4	0·05	0·68	0·15	0·88	0·53	0·19	nil.	2·48
	Nimar	3	0·06	0·44	0·14	nil.	0·64	5·62	0·38	7·28

The chief peculiarity in the distribution of the rainfall was the contrast between the large amounts registered at stations to the south of the

line of advance, and those received at stations situated to the north of the path of the centre.

The following tables give the average district rainfall in the districts immediately to the south of the centre and those to the north of it for the same periods in the Central Provinces, Orissa, and the adjacent districts of South-west Bengal :—

Districts to north of centre.	Total average rainfall June 27th to July 1st.	Districts in Orissa to south of centre.	Total average rainfall of the same period.
24-Pergunnahs	2·50	Balasore	8·47
Midnapore	3·58	Cuttack	9·66
		Pooree	10·80

Districts in the Central Provinces to north of the path of the centre.	Total district rainfall June 30th to July 2nd.	Districts of the Central Provinces through which the centre passed, or which lay to the south of the path of the centre.	Total district rainfall June 30th to July 2nd.
Bilaspore	1·12	Sambalpore	2·31
Mandla	0·28	Raipore	2·90
Jubbulpore	1·22	Balaghat	3·21
Narsinghpore	1·80	Seoni	3·53
Damoh	0·60	Chindwara	5·25
Saugor	0·41	Hoshangabad	3·87
		Nagpur	6·13
		Bhandara	5·75
		Wardha	3·73
		Betul	5·24
		Nimar	6·26

The centre, it should be remembered, passed westwards near the northern boundaries of Sambalpore and Raipore and thence across the centre of the Balaghat, Seoni, Chindwara, and Hoshangabad districts. It will thus be seen that the rainfall was distinctly heaviest at some distance to the south of the path of the centre, and that the rainfall in the northern half of the cyclonic area was barely twenty-five per cent. of the amount received in the southern half.

It is not possible to give similar details for Central India and the northern districts of the Bombay Presidency. The following table gives the rainfall at the nearest meteorological observatories to the north and south of the path of the centre, and a glance will show that there was the same marked contrast between the rainfall in the northern and southern portions of the storm area during the latter part of its course, when it was approaching the Arabian Sea.

Meteorological stations north of path of centre.	Total rainfall July 1st to 4th.	Meteorological stations south of path of centre.	Total rainfall July 1st to 4th.
Indore	1·92	Surat	5·80
Neemuch	1·16	Ahmedabad	5·43
Deesa	2·61	Malegaon	4·17
Ajmere.....	0·53	Bombay	1·09
Hyderabad	0·38	Rajkot	10·58
Kurrachee	2·00	Bhuj	5·82

The previous peculiarities to a certain extent explain the striking contrast between the force of the wind in different quadrants, more especially when the storm was advancing over the sea or low ground. This has already been briefly referred to in the account of the meteorology of the present storm on the 28th and 29th (*vide* pages 86 and 93). It was there shown that the Pemba, at a distance of at least 200 miles to the south-east of the centre, had strong south-westerly winds of average force 9, which were frequently interrupted by excessively violent squalls; and that the ships and light-vessels, so long as they were in the western and northern quadrants, had winds from directions between N. W. and N. E. varying in force from 1 to 5, but that, when they passed in to the opposite quadrants, they experienced very violent westerly or south-westerly winds of force varying from 9 to 11.

This feature is shewn most strikingly by the anemometric observations taken at Saugor Island during the storm, which have been referred to in page 95, but are now given in full in illustration of this feature :—

Date.	Hour.	Barometer.	Wind.		Weather and Sea.
			Direction.	Amount during preceding 2 hours.	
June 28th..	13	29·332	N. N. E.	37	Sea rough. Threatening.
	15	·389	N. E.	38	Dark gloomy weather.
	17	·287	N. N. E.	45	Thunder and lightning at distance.
	19	·289	N. N. E.	48	
	21	·327	N.	43	Raining.
	23	·286	N. W.	54	Strong wind.
June 29th..	1	·204	W.	53	Raining.
	3	·126	N. N. E.	27	
	5	·176	N.	37	
	7	·183	N.	44	Sea very rough.
	9	·171	E.	18	Dark gloomy weather.
	11	·166	E.	34	
	13	·126	N. N. E.	54	
	15	·129	W.	5	
	17	·162	S.	78	Sea tremendous.
	19	·242	S.	46	Severe gale of wind.

Hence a prominent feature of this, as of many of the storms of the rains in the Bay, was excessively violent westerly and south-westerly winds in the southern and eastern quadrants and comparatively feeble winds in the northern and western quadrants. The great inequality of the winds in different quadrants in the majority of storms of the rains has caused them to be considered as mere westerly gales by seamen. It is, however, now proved beyond doubt that they are cyclonic disturbances in which the winds are rarely violent and dangerous except in the south and east quadrants, where westerly and south-westerly winds of force 8 to 10 may be experienced, interrupted by squalls as violent in character, so far as can be judged from the accounts of sailors, as are felt in the largest and most intense cyclones of the Bay.

The following additional illustrations are given of the difference of the force of the wind in the different quadrants of the cyclonic disturbance. It should, however, be remembered that it is difficult to explain many of

the differences in the amount of wind recorded at different stations apparently similarly situated with regard to the storm. They can only be ascribed either to erroneous reading of the anemometers by the observers at the stations under consideration, or to slight but influential differences in the geographical or topographical features of the districts or stations in which the meteorological observatories are situated. The latter appears to be the more probable explanation.

	Stations.	Direction.	Average wind velocity during previous 24 hours.	Stations.	Direction.	Average wind velocity during previous 24 hours.
28th...	Saugor Island ...	N. N. E.	8·0	False Point	W. S. W.	10·0
29th...	Saugor Island ...	E.	16·0	False Point	W. S. W.	23·0
30th	Seoni	N. W.	5·0	Raipur	W.	20·8
	Jubbulpore	W. N. W.	6·0	Cuttack	W.	10·0
	Nagpur	N. W.	9·0	Saugor Island	S. E.	19·0
				Balasore.....		
1st	Seoni	N. N. W.	15·0	Raipur	S. W.	20·0
	Jubbulpore	N. N. E.	8·0	Nagpur	W.	11·0
	Sutna	E.	21·0	Sambalpore	S. W.	1·4
				Cuttack	W.	7·0
2nd	Indore	N. E.	13·0	Surat	S. W.	17·0
	Jeypore.....	N. E.	7·0	Akola	W.	22·0
	Ajmere	E. N. E.	5·0	Amraoti.....	W. S. W.	43·0
	Saugor	N. E.	11·0	Khandwa	W. S. W.	13·0
				Nagpur	S. W.	18·0
3rd	Kurrachee.....	N. N. W.	18·0	Raipur	S. W.	33·0
	Bhuj	N. N. W.	3·0	Neemuch	S. S. W.	22·0
	Hyderabad	N.	8·0	Deesa.....	S. E.	17·0

The contrast between the winds in different quarters is also evidenced by the amounts of wind received at the same station from different directions. Thus, at Saugor Island, the amount of wind registered for the 24 hours preceding 4 P. M. of the 28th was 192 miles, and for the same period prior to 4 P. M. of the 29th it was 524 miles. The wind during these intervals was from N. E. During the next 24 hours, when southerly winds chiefly prevailed, 776 miles were recorded. Similarly, at Balasore, 240 miles were registered for the 48 hours pre-

ceding 10 A. M. of the 29th, and 576 miles during the succeeding 48 hours (with southerly winds). At Rajkot, the amount of north-westerly winds during the 24 hours preceding 4 P. M. of the 2nd was 272 miles, and at Bhuj 390 miles. During the next 24 hours, when south-westerly winds blew at these stations, 391 and 760 miles respectively were registered. The amount of wind (mainly from N. W.) recorded at Kurrachee for the 24 hours preceding 4 P. M. on the 3rd was 406 miles. For the succeeding 24 hours, when easterly winds prevailed, 933 miles were registered.

There are other and less important features, to which it will be sufficient to refer briefly. One of these was the comparative smallness of the storm area proper. If we estimate it by the area in which strong winds prevailed and heavy rain fell, it almost certainly did not exceed 250 miles in length by 100 to 150 miles in breadth, at any time during its passage across the continent. The smallness of the storm area and the slight barometric depression in all storms of the rains are cognate features due probably to the peculiar conditions of their formation, as cyclones of high elevation. Another feature was the very great irregularity of the winds. This was shown (at Saugor Island, for instance) by intervals of comparatively feeble winds during the middle of the storm, and also by the apparent occurrence of much feebler winds at stations nearer to the centre than at those at a greater distance. As, however, anemometric observations are confessedly not intercomparable, it is not possible to establish the fact of this irregularity on such evidence.

APPENDIX I.

Extract from the Log of the F. L. V. Comet, giving observations during Storm of June 27th to 30th.

Date.	Hour.	Wind.		Barometer reduced.	Weather.	Remarks.
		Direction.	Force.			
28th of June 1882.	8	N.	4	29·321	Thunder.	Commences with dirty threatening weather. Lightning all round the horizon. A long heavy swell from E. S. E. 3 A. M. Squally with passing showers, ugly appearance of weather. 8 A. M. Weather the same. A large circle round the sun.

Date.	Hour.	Wind. Direction.	Wind. Force.	Barometer reduced.	Weather.	Remarks.
28th of June 1883.	9	N. N. E.	4	29·327		
	10	N. E.	4	29·327	Raining.	
	11	...	3to5	29·308		
	12	...	4to6	29·277	Thunder.	Noon. Every appearance of a cyclone. Heavy confused sea, with squally weather, and passing showers and thunder.
	13			29·266		
	14	...	6to5	29·252	Thunder.	
	15			29·241		
	16	...	5	29·215	Squally.	4 P. M. Wind and weather the same. Observed the sky of dark red appearance to the southward and eastward.
	17			29·220		
	18	N.	5	29·226	Squally.	
	19			29·230		
	20	...	5	29·253	Thunder.	8 P. M. Wind and weather the same.
	21	...		29·260		
	22	N. N. W.	5	29·236	Thunder.	
	23			29·197		
	24	N. W.	6	29·195	Thunder.	Midnight. Wind and weather the same. Barometer still falling, every appearance of heavy weather. Thunder and lightning all round the horizon.
29th of June 1883.	1	W. N. W.	6	29·148		Commences with dirty and very threatening weather. Lightning all round the horizon. A very heavy sea running from S. E. Winds variable.
	2	N. N. E.	6	29·070	Raining.	
	3	...	6	29·094		
	4	...	5	29·074	Thunder.	
	5	N. N. W.	5to6	29·112		
	6	...	6	29·126	Squally.	
	7	...	6	29·138		

Date.	Hour.	Wind. Direction.	Wind. Force.	Barometer reduced.	Weather.	Remarks.
29th June 1883.	8	W.	6	29·120	Squally.	8 A. M. Wind and weather the same, but sea increasing. Wind shifting all round the compass, from west through south and east, accompanied with terrific rain squalls.
	9			29·122		
	10	S. S. E.	3	29·140	Squally.	
	11			29·086		
	12	E. N. E.	7	28·998	Raining.	Noon. Blowing a furious gale with terrific heavy squalls. Sea still increasing and barometer falling.
	13	N. N. W.	8	28·989	Raining.	
	14	W.	8	29·068	Raining.	
	15	...	8	29·088	Raining.	
	16	S. W.	9	29·108	Raining.	4 P. M. Wind and weather the same.
	17	S. S. W.	9	29·184	Raining.	
	18	S. W.	9	29·184	Raining.	
	19	S. S. W.	9	29·164	Raining.	
	20	...	9	29·247	Raining.	8 P. M. Wind and weather the same.
	21	S. S. W.	9	29·288	Raining.	
	22	...	9	29·306	Raining.	
	23	...	9	29·320	Raining.	
	24	...	9	29·326	Raining.	Midnight. Weather more moderate, less wind and sea.
30th of June 1883.	1	S. S. W.	7	29·324	Raining.	Commences with moderate gale and high sea but better appearance in the weather.
	2	,,	7	29·336	Raining.	
	3	,,	7	29·346	Raining.	
	4	,,	7	29·353	Raining.	
	5	,,	7	29·356	Raining.	
	6	,,	7	29·361	Overcast.	
	7	S.	8	29·365	Overcast.	
	8	,,	8	29·415	Raining.	8 A. M. Observed a large circle round the sun.
	9	,,	8	29·440	Raining.	
	10	,,	8	29·474	Overcast.	
	11	,,	6	29·486	Overcast.	
	12	,,	6	29·464	Raining.	Noon. Strong breezes with blinding rain squalls.
						P. M. Weather fine. Heavy swell from southward.

CHAPTER IV.

The History of the Storm of the 10th to 15th November, 1883.

The present storm was generated in the Gulf of Martaban, after the north-east monsoon had been established for more than a month over the north and centre of the Bay. The rains of the south-west monsoon terminated prematurely in Bengal in the last week of September. It is a well-known fact that the commencement of the north-east monsoon on the Coromandel coast is due to the recurvature of the south-west monsoon winds over the south and centre of the Bay. The lower atmospheric current, which is from south-west in the extreme south, at that period changes, through south-east and east in the centre of the Bay, to north-east on the Madras coast. The south-west monsoon current of the year 1883 was unusually weak, and, when it retreated from Bengal, it recurved immediately, and north-east winds were established on the Madras coast in the first week of October. Hence the north-east monsoon rains set in over the Madras Presidency a week or ten days earlier than usual. They gave general, and unusually heavy, rainfall, as is shown by the following table of rainfall at eight of the more important stations in that Presidency.

Rainfall at eight stations of the Madras Presidency, October 1883.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Coconada ...	...	...	...	...	...	...	...	...	...	...	...	...	1·62	2·35	0·10	0·23	1·50
Masulipatam	0·30	...	...	0·18	0·13	...	...	0·02	...	...	...	...	0·75	2·44	...	1·47	0·31
Madras	...	4·88	0·20	0·34	...	0·01	0·08	...	...	...	0·48	0·36	1·81	1·51	1·06	3·40	0·57
Salem...	...	...	2·75	...	0·20	0·15	...	...	...	0·01	1·05	0·75	0·14	0·66	1·04	1·83	0·80
Nellore	...	0·50	0·35	...	...	...	0·05	0·15	...	...	...	0·50	0·60	4·45	0·95	0·45	2·20
Madura	...	...	0·05	0·04	0·35	...	...	...	0·45	...	...	2·10	0·26	0·20	2·16	0·34	0·13
Trichinopoly	...	...	0·43	1·55	...	...	...	...	...	0·70	...	...	0·10	0·26	0·46	0·63	...
Tanjore	...	1·04	...	0·47	...	...	...	...	...	...	...	0·06	...	1·47	0·83	0·10	...

Stations.	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total.	Average.
Coconada ...	0·66	...	...	...	...	...	...	...	...	...	...	0·90	0·25	5·70	13·31	8·60
Masulipatam	0·28	...	0·21	0·05	0·01	...	0·24	0·03	...	...	0·03	1·25	0·70	4·95	13·35	8·58
Madras	0·16	0·10	0·12	0·37	...	...	...	0·02	0·16	2·89	2·12	1·54	...	...	22·18	10·80
Salem...	...	1·27	...	0·08	...	...	...	...	0·40	0·35	...	...	...	0·96	12·44	7·22
Nellore	0·30	...	...	...	...	...	...	...	0·15	...	...	2·55	8·20	3·00	24·40	9·84
Madura	...	0·41	...	0·07	...	0·50	...	1·35	...	0·25	0·12	...	...	0·20	8·98	8·88
Trichinopoly	...	2·47	...	0·46	...	...	...	...	...	0·10	0·09	...	...	0·69	7·94	7·86
Tanjore	0·08	0·06	1·70	...	...	...	...	...	0·20	0·60	...	0·05	...	0·20	6·86	5·60

Rainfall at eight stations of the Madras Presidency, November 1883.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Coconada....	6·45	3.25	0·22	...	0·05	...	...	...	...	...	...	...	...	...	...
Masulipatam	12·56	2.29	...	...	...	...	...	...	...	...	...	...	...	...	...
Madras	1·87	2·46	2·12	1·15	0·27	0·12	0·14	0·41	0·02	...	...	...	...	...	...
Salem...	0·73	0·94	0·27	1·16	0·16	...	0·02	0·01	0·75	0·06	...	...	...	...	...
Nellore	1·00	1·60	0·45	0·60	0·05	0·95	...	...	...	...	...	...	...	...	...
Madura	1·95	1·80	1·08	3·00	...	0·20	0·04	0.03	...	0·33	2·00	...	...	...	...
Trichinopoly	...	0·06	0·25	1·96	...	...	1·44	...	0·10	...	...	...	...	...	...
Tanjore	...	0·27	0·08	1·78	1·02	0·06	...	0·85	...	...	...	...	...	...	...

Stations.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total.	Average.
Cocanada ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9·97	3·59
Masulipatam	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14·85	4·11
Madras	...	...	0·30	4·75	1·31	...	...	...	...	...	...	...	...	...	...	14·92	13·40
Salem...	...	...	0·25	0·01	...	...	...	...	...	...	...	...	...	...	...	4·36	2·65
Nellore	...	...	0·55	0·70	...	...	...	...	...	...	...	...	...	...	...	5·90	10·17
Madura	...	...	0·20	...	...	0·35	...	...	...	...	...	...	...	...	...	10·98	5·37
Trichinopoly	...	1·26	...	0·08	0·07	...	...	...	...	...	...	...	...	...	...	5·22	5·23
Tanjore	...	...	2·90	0·02	0·17	0·48	...	...	...	...	...	...	...	...	...	7·63	5·54

The preceding table shews that rain fell more or less continuously during the whole of October and until the 4th of November, after which a few showers fell until the 9th and 10th, when rain entirely ceased for several days. After the 4th, the north-east monsoon current decreased

in strength, as is shewn by the following return of the wind observations on the Madras coast :—

	November average.		1st.		2nd.		3rd.		4th.		5th.		6th.		7th.	
	Dir.	Amount.	Dir.	Amount.	Dir.	Amount.	Dir.	Amount.	Dir.	Amount.	Dir.	Amount.	Dir.	Amount.	Dir.	Amount.
Vizagapatam.	N83°E	2·5	N	2	N	1	N	3	N	3	NE	3	N	4	NE	2
Masulipatam.	N56°E	6·0	NNE	9	SE	9	ENE	6	ENE	9	ENE	7	NE	8	NNE	7
Madras. .	N24°E	6·8	WSW	5	SE	6	SE	7	NNE	5	N	5	N	6	E	4
Negapatam.	N37°E	5·6	SW	?	SW	0	WNW	?	NE	?	NNE	2	NE	4	NNE	6

The preceding observations shew that the north-east winds on the Madras coast were diminishing in force. It is, therefore, probable that the south-west monsoon current over the south of the Bay was much weaker, and that, instead of recurving and blowing strongly on the Madras coast, it was continued over the centre of the Bay as light and variable winds. This supposition is, it will be seen, confirmed by the accounts of the weather contained in the logs of the vessels navigating the Bay to the west of the Andamans at that time. The cyclone did not commence to form until the 9th of November, but the meteorology of the Bay on the 7th and 8th is given to shew the character of the weather prior to the storm.

7th November.—The barometer was oscillating at the time slowly over the whole of India, and the distribution of pressure was almost identical with that which had obtained for the previous three or four days, and differed very slightly from the normal. A slight rise of the barometer occurred during the previous 24 hours at the great majority of stations. The barometric changes were, however, of no importance. The barometer was highest in Scind and Rajputana, where the readings averaged 30·05″, and was lowest over the south of the Bay, where, as shown by the returns of Negapatam, Trincomalee, Port Blair, and Nancowry, it was slightly below 29·95″. The differences of pressure were hence comparatively small over the whole area.

The following table gives the 10 A. M. readings of the barometer,

reduced to sea level and for temperature, at the more important meteorological stations around the Bay :—

Stations.	Barometer at 10 A. M. reduced to sea level.	Stations.	Barometer at 10 A. M. reduced to sea level.
Saugor Island	30·028	Chittagong	29·994
False Point	30·028	Akyab	29·975
Gopaulpore	30·016	Diamond Island	29·970
Vizagapatam	30·014	Port Blair.....	29·945
Madras	30·013	Nancowry.....	29·943
Negapatam	29·948	Moulmein	29·958
Trincomalee	29·951	Rangoon	30·004(?)
		Mergui	29·956

The gradients over the Bay were normal in character, pressure decreasing from north to south. The total barometric difference was slightly less than nine-hundreths of an inch. The average barometric difference between the north and south of the Bay in the middle of November is ·075″. The distribution of pressure over the Bay on the 7th was very approximately normal.

Over the greater part of India, including the whole of Northern and Central India and the North Deccan, the weather was fine and skies clear. These were clouded in Southern India, more especially on the Coromandel coast, where they were generally overcast. Over the whole of the Indian land area, winds were normal in direction. North-westerly to westerly winds prevailed over the greater part of the Gangetic plain, and northerly winds in the Gangetic Delta. Along and near the Coromandel coast, north-easterly humid winds were giving moderate showers of rain. In Burmah, winds varying between east and north-east prevailed. The weather in every part of the Indian area, so far as can be judged from the land observations, was of the usual November, or cold weather, type. There were no signs of the existence of any atmospheric disturbance either in the land or adjacent sea area.

The only indications of the probable early occurrence of stormy weather in the Bay were the lightness and variability of the winds over the centre and south of the Bay, and the rapid and steady decrease in the rainfall of the Madras Presidency.

The following table gives the chief observations taken during the day at the stations subsequently affected by the cyclone:—

Stations.	Barometer at 10 A. M. reduced to sea level.	Change since 10 A. M. previous day.	Wind direction.		Velocity in miles per hour since 10 A. M. previous day.	Cloud amount at 10 A. M.	Rainfall at 10 A. M. preceding 24 hours.	Weather.
			10 A. M.	4 P. M.				
Nancowry	29·943	+ ·041	S.	S.S.W.	4	6	0·62	
Port Blair	29·945	+ ·003	S. E.	S. E.	4	7	...	
Diamond Island	29·970	+ ·033	E. N. E.	E.	5	5	0·11	Thunder.
Akyab	29·975	+ ·027	E. N. E.	W.	2	1	...	Fine.
Chittagong ...	29·994	+ ·027	N.N. E.	E.	2	1	...	Fine.
Tounghoo	29·969	+ ·081	N. W.	N. W.	?	10	...	Threatening weather
Bassein	20·977	+ ·037	E.	S. E.	4	10	0·02	Gloomy.
Rangoon	30·004?	+ ·068	E. N. E.	E.N.E.	3	10	0·28	Cloudy.
Moulmein	29·958	+ ·073	E.	N.NW	2	9	...	Cloudy.
Mergui	29·956	+ ·015	N.	Calm	1	6	...	Cloudy.

The information relating to the state of the weather in the Bay on the 7th of November, contained in the logs of vessels navigating the Bay at this period, is given in the following statement:—

Vessel.	Hour.	Latitude. N.	Longitude. E.	Probable reduced barometer.	Wind.		Remarks.
					Dir.	Force.	
Mount Stuart	Noon	11° 50′	91° 50′	29·925	E.	...	Passing clouds towards noon, heavy rain clouds all round, but cleared away towards sunset. Weather unsettled-looking.
	4 P. M.				E.	2	
	8 P. M.				variable.	3	
	Midnt.				S.	...	
KwangTung	4 A. M.			29·851	S. E.	2	
	8 A. M.			·909	N. E.	2	Fine weather throughout.
	Noon	12° 33′	93° 6′	·943	N. E.	2	
	4 P. M.			·921	N. E.	2	Sea smooth.
	8 P. M.			·909	N. E.	2	
	Midnt.			·906	S. W.	2	

Vessel.	Hour.	Latitude. N.	Longitude.	Probable reduced barometer.	Wind.		Remarks.
					Dir.	Force.	
Frank Stafford	4 A. M.				N.	4	Fine weather and smooth sea.
	Noon	19° 43′	88° 15′	29·980	N.	4	
	Midnt.				N.	4	
Parthenope	Noon	20° 10′	89° 51′	29·975	N.	Moderate	A. M. Light unsteady breeze, fine, and clear. Noon. Wind very unsteady. Current perceptible, setting to the S. W. 4 P. M. Moderate breeze. 8 P. M. Light breeze and clear, with frequent lightning.
	Midnt.				N. W.	Light.	
Breadalbane	Noon	20° 55′	88° 8′	29·975	N. N. E.	0 to 1	Calm and variable airs throughout, current to S. W.
	4 P. M.				NE by N	2 to 3	Sea moderate. No rain.

The information respecting the weather in the Bay is very limited, and confined to extracts from the logs of five vessels, and to the observations at Port Blair, Nancowry, the coast stations, and on board the light vessels near the entrance to the Hooghly.

Three vessels, the Frank Stafford, Parthenope, and Breadalbane, were near the Head of the Bay. The weather was fine, the sea smooth, and winds light and unsteady. These varied between N. E. and N. W. in direction, and did not exceed force 4 at any time during the day. At Port Blair, the sky, which had been almost clear on the 4th, 5th, and 6th, was clouding over. The air was unusually clear in the morning, but the weather became cloudy and gloomy in the afternoon. No rain fell on this day, nor had any fallen since the 4th. The winds also were extremely light. Only 100·6 miles were registered for the 24 hours preceding 4 P. M., the smallest amount in 24 hours recorded during the month.

The sky had been densely clouded at Nancowry for some days past, and rain in moderate amounts had been recorded on every day. On the 6th ·62 inch fell with S. S. W. winds. During the first three days of the month, the winds were from south-east, the normal direction

in November, when the south-west monsoon is recurving over the centre of the Bay, and giving north-easterly monsoon winds and rain to the Coromandel coast. The amount of wind registered at Nancowry on each day of the first week of the month, is given in the following table :—

	Total wind amount of the 24 hours previous to 4 P. M.	Rainfall at 6 P. M. of the preceding 24 hours.	Wind direction 10 A. M.
1st	46·7	0·47	S. E.
2nd	38·2	0·21	S. E.
3rd	44·0	2·86	E. S. E.
4th	19·5	0·41	S. W.
5th	18·8	0·96	S. W.
6th	17·1	0·62	S. W.
7th	125·4	1·14	S. S. W.
Average October	149·7	...	S. 50° W.
„ November ...	117·2	...	S. 29° E.

This shows that, in consequences of atmospheric actions, the nature of which can only be conjectured, the air motion over the south of the Bay was unusually and remarkably feeble during the first week of the month. The moist current advancing northward, instead of curving through south-east and east and arriving as north-east winds charged with vapour on the Coromandel coast, was exceedingly weak for some days in the neighbourhood of the Nicobars. It had also shifted in direction on the 4th, and was proceeding from the south-west directly into the Martaban Gulf. Rain also began to fall in increasing amounts over this and the adjacent parts of the Bay.

The ship Mount Stuart was advancing northwards, a little distance to the west of the Andamans. She was in Lat. 11° 50′ N. and Long. 91° 50′ at noon, and during the day had very variable winds commencing from N. E. by N. and ending at S. The weather was fine, but the air was charged with moisture. This is shown by the fact, noted by the Captain, that, during the hotter part of the day, when there is undoubtedly much upward movement of the air, heavy rain clouds formed all around, but cleared away again towards sunset.

The Kwang Tung, on the other hand, was to the east of the Andamans in Lat. 12° 33′ N. and Long. 93° 6′ E. She had fine weather throughout, with light and variable winds during the day of force 2. The wind shifted from S. E. to N. E. and thence to S. W. during the day.

Hence, so far as can be judged from the various meteorological returns, light winds and fine weather prevailed over the greater part of the Bay. The usual change in the direction or recurvature of the south-west monsoon current (which gives a feeble cyclonic circulation to the air over the centre and south of the Bay) was not only much weaker than usual, but was suspended over a part of the area in the neighbourhood of the Nicobars and Andamans, where very light unsteady winds had prevailed for the previous two or three days. There is, however, no evidence in the meteorology of this day of the existence of any local cyclonic circulation, such as might form the initial stage in the development of a cyclonic disturbance or storm.

The observations at Moulmein and Mergui confirm the previous statements, and prove the existence of light variable winds, chiefly from the east and north, on the east coast of the Martaban Sea.

8th November.—During the preceding 24 hours, a rapid fall of the barometer had taken place in the Punjab. The amount of the fall was ·26″ at Mooltan, ·13″ at Quetta, and ·12″ at Dera Ismail Khan and Lahore.

It will be seen from the meteorology of the 9th and 10th that this fall was the first indication of the occurrence of a cold weather or north-east monsoon storm in Upper India. It is during these storms that a large portion of the snowfall of the higher Himalayas takes place. In consequence of this rapid fall, pressure was lowest over the Punjab. Sudden and large changes of pressure are a frequent feature of the cold weather in the Punjab. It is not yet quite certain whether the formation of these Punjab areas of low pressure commences simultaneously over the Western Punjab and the adjacent districts of Afghanistan or Belochistan. This appears to be the most probable explanation, but it is not unlikely that some may occasionally form much further to the west, and pass through Afghanistan or Belochistan into the Punjab or Sind. It will, however, presently be seen that this considerable disturbance in the Punjab exercised no appreciable action on the atmospheric circulation in the Bay of Bengal.

The distribution of pressure was somewhat complicated over India itself. Pressure was lowest in the Indus Valley. A broad band of high pressure stretched down the middle of India from Ajmere to Secunderabad, whilst pressure was approximately uniform over the Bay.

The changes of pressure were not accompanied by any immediate marked change in the wind or weather. Skies were clear, and weather fine and dry over all parts of India, except South Burmah and Southern India (more especially the Coromandel Coast), where skies were overcast and occasional showers continued to be received. The amounts which fell at the various rainfall registering stations were very small.

The only alteration in the wind directions that deserves notice occurred at Diamond Island and Akyab, where the wind had shifted round to south-east. This of course indicated the further northward extension of the south-west monsoon current which had commenced on the 4th at Nancowry.

The following table gives the 10 A. M. reduced barometric readings of the recording stations on the coast of the Bay :—

Stations on west coast of the Bay.		Stations on east coast of the Bay.	
Stations.	Barometer 10 A. M. reduced to sea level.	Stations.	Barometer 10 A. M. reduced to sea level.
Saugor Island	29·977	Chittagong	29·953
False Point	29·983	Akyab	29·930
Vizagapatam	29·976	Diamond Island	29·930
Madras	29·983	Moulmein	29·928
Negapatam	29·978	Port Blair	29·936
		Nancowry	29·922

The differences of pressure along the west coast were much smaller than on the 7th, and pressure was very approximately uniform. It was slightly lower at the east coast stations, but, even there, the differences were extremely small.

The following table gives the 10 A. M. observations at stations in the neighbourhood of the area in which the storm was generated :—

Stations.	Barometer at 10 A. M. reduced to sea level.	Change since 10 A. M. previous day.	Wind direction.		Velocity in miles per hour since 10 A. M. previous day.	Cloud amount at 10 A. M.	Rainfall at 10 A. M. preceding 24 hours.	Weather.
			10 A. M.	4 P. M.				
Nancowry	29·922	— ·021	S. W.	S. W.	7	10	1·14	
Port Blair	29·936	— ·009	W. S. W.	W. S. W.	5	9	0·18	
Diamond Island	29·930	— ·040	E. S. E.	S.	13	10	2·35	Thunder.
Akyab	29·930	— ·045	S. S. E.	?	2	6	0·16	
Chittagong ...	29·953	— ·041	N.	E. S. E.	1	0	...	
Toungoo	29·980	+ ·011	S. W.	S. E.	?	10	...	
Bassein	29·941	— ·036	S. E.	S. S. E.	4	10	0·10	
Rangoon	29·965	— ·039	E.	S. S. E.	2	10	0·41	Showery.
Moulmein	29·928	— ·030	S. E.	N. W.	2	7	...	Thunder.
Mergui	29·965	+ ·009	E.	S.	2	10	0·25	

The information relating to the meteorology of the Bay on the 8th is given in the following table :—

Vessels.	Hour.	Latitude. N.	Longitude. E.	Probable reduced barometer.	Winds. Dir.	Winds. Force.	Remarks.
Mount Stuart	4 A. M.				S. to W.	2 to 3	Sea smooth. Passing showers during day.
	Noon	12° 17′	92° 00′	29·925	...	1 to 2	Heavy black clouds all round, with momentary puffs from N. W., and smart showers towards midnight. There was lightning in the N. W. during the morning. Midnight. Weather was a little squally.
	4 P. M.				W to SE.	1	
	Midnt.				W to NW	2 to 4	
Scottish Hill	Noon	12° 31′	89° 25′	29·920	E. to W.	1	Light airs and calms.
	4 P. M.					0	Wind very variable.
	8 P. M.					0	Sky dull lead colour.
	Midnt.			29·900		1	
Kwang Tung	4 A. M.			29·901	N. W.	2	
	8 A. M.			·926	N. W.	2	
	Noon	15° 11′	92° 6′	·893	N. W.	2	Smooth sea.
	4 P. M.			·901	N. W.	4 to 5	
	8 P. M.			·871	N. W.	do.	
	Midnt.			·903	N. W.	do.	
Frank Stafford.	4 A. M.				NW by N	2	Fine weather, smooth sea.
	8 A. M.				North.	2	Very sharp lightning in the S. E. during the night.
	Noon	20° 16′	90° 28′	29·975	N. N. W.	2	
	8 P. M.				N. N. W.	1	
	Midnt.				N. N. W.	0	
Breadalbane	Noon	21° 00′	88° 18′	29·975	N.		Sunrise. Moderate breeze from N., dying away in the afternoon to a calm.
Parthenope	Noon	21° 2′	88° 52′	29·975	N. W.	gentle.	A. M. Light breeze, fine and clear. 8 A. M. Moderate breeze and hazy. Noon. Less wind, current setting west. 4 P. M. Light airs. 8 P. M. Calm. Midnight. Gentle breeze and clear.
	Midnt.				N. by E.		

The Nancowry returns prove that the south-west winds in the neighbouring part of the Bay began to increase in strength. The sky was overcast during the day, and 1·14 inches of rain were registered for the 24 hours preceding 1 P. M. The wind during the previous night had shifted round to W. S. W. at Port Blair, and blew steadily during the day, and somewhat more strongly than on either of the previous two days. The sky had clouded over, and rain in small amounts began to fall. ·18 inch was recorded at 4 P. M.

The weather was slightly disturbed in South Burmah. Passing showers fell during the day, and thunderstorms occurred in one or two cases. East-south-east winds set in at Diamond Island and at Rangoon. In the interior of Burmah, winds were not so steady as they had been previously. The sky was overcast at Mergui, winds were light and variable, and veered from east to south during the day.

The prevalence of S. W. winds at Port Blair and Nancowry, and of E. and S. E. winds at the Burmah stations, shews that there was on this day no well-defined cyclonic circulation, or centre of large disturbance, in the Martaban Gulf.

The logs of the vessels in the Bay for the day indicate that similar conditions obtained to those of the preceding day.

The Frank Stafford, Parthenope, and Breadalbane were at the Head of the Bay near the entrance to the Hooghly. They experienced fine weather, light winds and calms, and a smooth sea. The Kwang Tung had steamed to the north-west during the previous 24 hours, and was in Lat. 15° 11′ N. and Long. 92° 6′ E. at noon. Her log shows that there was no perceptible current in this part of the Bay at this time, an almost conclusive proof of the absence of any strong atmospheric cyclonic circulation in the neighbourhood. The ships Mount Stuart and Scottish Hill were a little to the west of the Andamans. The former was in Lat. 12° 17′ N. and Long. 92° E. Her log states that the sea was smooth, but that the weather was becoming unsettled. She began to experience puffs or slight squalls from the north-west. The sky during the day was covered with dense black clouds, and occasional showers fell, which became heavier and "smarter" as the day advanced. The winds were very variable, veering from S. through W. thence to S. E. and back to W. and N. W. The log of the Scottish Hill, which was about 180 miles to the west of the Mount Stuart, gives similar information. The winds were very light and variable, veering round the compass, the sky was heavily clouded, and the weather dull and gloomy.

Hence the various observations indicate the continuance and slight development of the conditions which, according to our experience of the meteorology of the Bay, precede the formation of cyclonic storms. On the other hand, they give no evidence of the existence at this time of a

cyclonic circulation in the Martaban Gulf. South-westerly winds were increasing in force over the south-east of the Bay, and were being continued much further north than is usual in the month of November. To the west of the Andamans, winds were exceedingly light and variable, and such as to show that the south-west winds advancing northwards were not being continued in that direction near the earth's surface. The clouding over of the sky, the commencement of showers increasing in intensity and accompanied with slight squalls, indicate clearly that ascensional movement on a large scale was commencing over that area, and giving rise to its usual result when it is partly fed and maintained by a moist current, namely, rainfall increasing in intensity, which, by a known law of rainfall, tends to become concentrated over a limited area.

9th November.—There are no new features of interest in the meteorology of the Indian land area. Pressure continued to give way in all parts of India. The decrease was greatest in Sind, Rajputana, and the Punjab. The area of barometric depression over the Indus valley was now very distinctly marked. It had as yet exercised no marked influence in the weather of Upper India. The winds were, however, drawing round in the Punjab and neighbouring districts, and indicated a feeble cyclonic air circulation over Upper India. The ascensional movement which necessarily accompanied it, had not given rise to the formation of cloud, except over the North-Western Himalayas.

Over the whole of Bengal and the North-Western and Central Provinces, the air motion was very slight, averaging only 1 to 2 miles per hour.

In Southern India the weather conditions were unchanged. Cloudy skies continued in the Madras Presidency, and a few occasional showers of no importance were received.

The observations at the coast stations of the Bay of Bengal present the same features as hitherto. The baric gradients were apparently normal in direction, but somewhat smaller than usual, and the differences of pressure comparatively small. The most important feature was the weakness of the north-easterly winds on the Coromandel coast. This is shown by the following statement:—

Stations.	Amount of wind in miles per hour since 10 A. M. previous day.	Average daily amount of wind (miles per hour) in November.
Vizagapatam	2	2·5
Masulipatam	2	6·0
Madras	5	6·8
Negapatam	3	5·6
Trichinopoly	1	4·6
Madura	3	4·1

The information respecting the weather in the Bay is as hitherto meagre.

The following are the observations taken at the land observatories in the neighbourhood of the cyclonic disturbance :—

Stations.	Barometer at 10 A. M. reduced to sea level.	Change since 10 A. M. previous day.	Wind direction.		Velocity in miles per hour since 10 A. M. previous day.	Cloud amount at 10 A. M.	Rainfall at 10 A. M. preceding 24 hours.	Weather.
			10 A. M.	4 P. M.				
Nancowry	29·897	—·025	S. W.	S. W.	8	9	2·02	
Port Blair.....	29·894	—·042	W.	W. S. W.	7	9	0·17	Gloomy.
Diamond Island	29·900	—·030	E. S. E.	E. S. E.	10	5	1·41	Fine.
Chittagong ...	29·921	—·032	E. N. E.	N. N. W.	1	2	...	Fine.
Tounghoo	29·873?	—·107?	N. W.	N. W.	?	10	1·10	Thunder storm.
Bassein	29·924	—·017	E. S. E.	S. E.	5	10	0·17	Gloomy.
Rangoon	29·942	—·023	E. S. E.	S. S. E.	4	10	0·69	Showery
Moulmein	29·898	—·030	N. E.	E. S. E.	2	1	0·71	Showery
Mergui	29·995?	+·030?	S. S. E.	S. S. E.	2	10	...	Gloomy.

The Nancowry returns shew that a fall of ·03" had occurred in the barometer. The winds were slightly stronger, but were only blowing with an average velocity of 8 miles per hour, the normal rate at that station in November. The sky was overcast, and rain continued to fall in moderate amounts. 2·02 inches were registered for the 24 hours preceding 10 A. M.

Heavy rain was apparently falling at this time to the north-east of the Nicobars and to the east of the Andamans. There is no direct evidence of this statement. The first indications, however, of cyclonic motion are presented by the Port Blair observations of this day. The barometer was falling at that station, the sky was, as on the 8th, densely clouded, and heavy rain began to fall in the afternoon and evening. The wind shifted round to west at 10 A. M. and to W. S. W. at 4 P. M. On the opposite coast of the Martaban Gulf, the sky was overcast, but little rain fell. In South Burmah, the weather was fine with passing clouds, which gave occasional showers. The sea was slight at Diamond Island. Hence the evidence is fairly complete that there was, as on the 8th, no definite cyclonic circulation, although there were slight indications of its commencement.

The shift of wind at Port Blair, and the occurrence of rainfall with squalls to the west of it, render it almost certain that the usual actions, which initiate the formation of an atmospheric whirl on a large scale, were now commencing. The meteorology of the 10th will show that the formation probably proceeded slowly during the afternoon and night of the 9th, but afterwards with increasing rapidity.

The meteorological information relating to the weather in the Bay of Bengal on the 9th, extracted from the logs of vessels, is tabulated below :—

Vessel.	Hour.	Latitude. N.	Longitude. E.	Probable reduced barometer.	Winds.		Remarks.
					Dir.	Force.	
Scottish Hill	Noon	13° 1′	89° 42′	29·920	N. W.	1	Light airs and calms.
	4 P. M.				W.	0	Very sultry, clouds in light masses.
	8 P. M.				N. N. W.	0	Sky dull lead colour.
	Midnt.			·890	W.	2	
Mount Stuart	Noon	13° 8′	92° 2′	29·875		0	Sky overcast with heavy clouds all round. Weather unsettled. There was a good deal of lightning in the sky this morning and towards midnight, mostly in the N. W. Midnight. Weather showery.
	8 P. M.				N. E.	1 to 3	
	Midnt.				E. S. E.	1 to 2	
Kwang Tung	4 A. M.			29·924	N. E.	5	
	8 A. M.			·911	N. E.	5	
	Noon	17° 37′	90° 20′	·936	N. E.	5	Current during the 24 hours, S. 12° E. 15 miles.
	4 P. M.			·883	N. E.	5	Sea smooth.
	8 P. M.			·856	N.	5	
	Midnt.			·891	N. E.	5	
Satara	Noon	Anchored at Gopaulpore		29·950	E. by N.	2	Light breeze and fine clear weather.
	4 P. M.		Roads.	·840	...	1	Light airs and fine.
	8 P. M.			·880	...	1	
	Midnt.			·870	N E by E	3	Gentle breeze and fine.
Frank Stafford.	4 A. M.				N.	2	
	8 A. M.				...	2	Fine and smooth sea.
	Noon	21° 03′	90° 10′	29·935	...	0	
	4 P. M.				N. W.	2	
Parthenope	Noon	Near the Sand heads.		29·930	N.	Moderate	A. M. Light breeze and clear. Noon. Moderate breeze and hazy.
Breadalbane	Noon	Near the Sand heads.		29·935	N.		Calms and light airs from north throughout.
	4 P. M.				N.	1	Sea smooth and smart showers in the latter part of the day.
	8 P. M.				Calm.	0	

The Parthenope and Breadalbane, near the Sand Heads, had light airs and calms during the day. The ship Frank Stafford (in Lat. 21° 3′ N. Long. 90° 10′ E.) experienced gentle northerly winds with fine weather and a smooth sea.

The S. S. Kwang Tung had advanced 200 miles to the N. W., and was at noon in Lat. 17° 37′ N. and Long. 90° 20′ E. She experienced steady north-east winds of moderate force (5) during the day. The ships Mount Stuart and Scottish Hill were proceeding very slowly up the Bay, and had only made about 50 miles during the 24 hours preceding noon. The former was in Lat. 13° 8′ N. and Long. 92° 2′ E., and experienced similar weather to that of the preceding day. The sea was smooth as hitherto. The sky was covered with dense clouds, and heavy showers fell, more especially in the afternoon. The Scottish Hill was in the same latitude, but 160 miles further to the west. She had calms during the greater part of the day. The weather was very sultry. The air was apparently almost saturated with moisture. The sky was covered with clouds, and had an ominous appearance suggestive of bad weather.

The observations of the 9th shew that no atmospheric whirl had been initiated as yet in the Gulf of Martaban. Several of the conditions necessary for the formation of a cyclonic disturbance were present. Winds were light and variable over a considerable portion of the Bay. A strong humid current was advancing over the south of the Bay into the Gulf of Martaban, and was giving moderately heavy rain in the neighbourhood of the Andamans and Nicobars. The rainfall had hitherto been too diffused to initiate a large cyclonic disturbance. It was, however, increasing in amount, and becoming more concentrated in character, the one additional condition now apparently required for the establishment of a large atmospheric whirl.

10th November.—During the previous 24 hours, a further barometric fall occurred throughout the greater part of India. The fall was not so general as on the 8th and 9th, and was much smaller in amount. Pressure was very considerably below the normal over the whole country. The distribution of pressure was generally similar to that which obtained on the morning of the 9th. The area of lowest pressure included the south-western districts of the Punjab and Rajputana, over which there was a distinctly marked cyclonic circulation of the air. In the south of the Punjab, cloud had formed to a considerable extent, whilst, in the north-western Himalayas, thunder-storms with rain had occurred over the lower ranges, and snow had fallen on the higher ranges.

In the North West Provinces, Bengal, the Central Provinces, Central India, Bombay, and the northern districts of Madras, the sky was, as it had been for some time, clear, and the weather fine and settled, but un-

usually dry for the season. The sky was clouded on the Madras coast, but rain had now ceased to fall, as is shewn by the data given in the table on p. 130. The winds on the Madras coast were approximately normal in direction, varying between N. and N. N. W., but were unusually weak.

Hence the effect of the deflexion of the south-west monsoon current from its usual course at this time, which had been previously indicated by the light winds experienced by the Mount Stuart and Scottish Hill to the west of the Andamans, had now extended across the centre of the Bay to the Coromandel coast, over the whole of which area light unsteady winds were blowing. Pressure was very uniform round the north and west coasts of the Bay, as is shown by the following :—

Saugor Island	29·929	Vizagapatam	29·957
False Point	29·951	Madras	29·960

The following table gives the observations at the land stations for the day :—

Stations.	Barometer at 10 A.M. reduced to sea level.	Change since 10 A.M. previous day.	Wind direction.		Velocity in miles per hour since 10 A.M. previous day.	Cloud amount at 10 A.M.	Rainfall at 10 A.M. preceding 24 hours.	Weather.
			10 A.M.	4 P.M.				
Nancowry	29·856	—·041	S. W.	S. W.	8	9	1·16	Showery.
Port Blair.....	29·850	—·044	N. N. W.	W. N. W.	7	8	0·30	Gloomy.
Diamond Island	29·917	+·017	E. S. E.	E. S. E.	12	10	0·65	Gloomy.
Chittagong ...	29·915	—·006	N.	N. W.	1	6	...	Fine.
Tounghoo	29·905?	+·032?	N. W.	N. W.	?	10	0·22	Gloomy.
Bassein	29·917	—·007	N. E.	S. S. .	4	10	0·18	Overcast.
Rangoon	29·920	—·022	N. E.	E. S. E.	4	8	0·85	Showery.
Moulmein	29·871	—·027	E. N. E.	S. E.	2	8	...	Showery
Mergui	29·868?	—·127?	E. S. E.	E.	1	10	0·65	Gloomy.

The preceding observations establish that a considerable fall of the barometer had taken place during the previous 24 hours. The fall amounted to ·04″ at Nancowry and Port Blair, ·03″ at Moulmein, and ·02″ at Rangoon, and was greatest at Port Blair. Westerly winds of the same average strength as on the 9th had prevailed during the

previous 24 hours at Nancowry. The sky was densely clouded and moderate rain was falling. 1·16 inches of rain were registered at 10 A. M. At Port Blair, the wind had shifted round to north-west, but was not as yet blowing strongly. Rain was falling, but the amount registered up to 10 A. M. of the 10th was small. In South Burmah, the sky had become overcast, and the weather gloomy and threatening, more especially at Diamond Island and Toungoo. Less rain, however, fell on the Burmah coast than had been received on the previous day. It thus again appears probable, if not certain, that the rainfall was becoming more concentrated over a smaller area than hitherto, a favourable, if not a necessary, condition, according to the condensation theory, for the development of an atmospheric whirl.

These observations also show that cyclonic circulation had been initiated, and was now established over the centre and north of the Gulf of Martaban, and the adjacent part of the Bay; and that the central depression or centre of disturbance, as determined by the fall of the barometer, the amount of rain, and the velocity of the wind, was nearest to Port Blair, and to the east of it.

Hence it is evident that, although the conditions for the formation of a whirl had been present for some days, it was only on the 10th that the meteorological observations at the nearest land stations gave clear indications of its existence.

The information contained in the meteorological abstracts from the logs of vessels is tabulated below:—

Vessel.	Hour.	Latitude. N.	Longitude. E.	Probable reduced barometer.	Winds.		Remarks.
					Dir.	Force.	
Scottish Hill	4 A. M.				N.	1	Light airs and calms.
	8 A. M.				N. E.	1	Winds very variable.
	Noon	13° 31′	89° 40′	29·910	N. W.	1	Light airs and calms.
	4 P. M.				N. N. W.	2	Squally and dirty.
	8 P. M.				N. N. E.	3	Arched rain squalls.
	Midnt.			·890	N. W.	3	
Mount Stuart	4 A. M.				N. E.	1 to 0	Sea moderate with light westerly swell.
	8 A. M.				...	3 to 4	Light fleecy clouds. Lightning in the N.W.
	Noon	13° 55′	91° 31′	29·865	...	...	Towards the afternoon, weather began
	4 P. M.				...	4	to be squally. At sunset, sharp squalls
	8 P. M.			·805	...	...	and squally-looking all round. Midnight.
	Midnt.				E. by N.	...	Showery.

Vessel.	Hour.	Latitude. N.	Longitude. E.	Probable reduced barometer.	Winds.		Remarks.
					Dir.	Force.	
Satara	4 A. M.			29·870	N. N. E.	5	Fresh breeze and fine.
	8 A. M.			·940	E. N. E.	4	Moderate breeze & fine.
	Noon	17° 56′	88° 45′	·890	NE by E.	5	Fresh breeze and fine throughout. Current during previous 24 hours, north 4 miles.
	4 P. M.			·810	N. E.	4	Moderate breeze and fine.
	8 P. M.			·860	E. by S.	2	Light breeze and fine clear weather.
	Midnt.			·860	E. N. E.	2	Same wind and weather.
Kwang Tung	4 A. M.			29·942	N. E.	5	
	8 A. M.			·899	N.	4	
	Noon	20° 00′	88° 49′	·920	N.	3	Current S. 32° E. 24 miles.
	4 P. M.			·859	N.	3	Sea smooth.
	8 P. M.			·904	Calm.		
	Midnt.			·934	Calm.		
Frank Stafford.	4 A. M.				N. N. W.	2	
	Noon	21° 16′	89° 20′	29·915	...	2	Fine, and smooth sea.
	Midnt.				...	2	Lightning during the night.
Chanda	Noon	Hughly River		29·910	E. N. E.	2	
	4 P. M.			·830	E. N. E.	4	
	8 P. M.			·870	Calm.	...	
	Midnt.			·910	E.	2	
Mahratta ...	4 P. M.	Passing Saugor	Island	29·820	E.	2	Fine weather.
	8 P. M.			·900		0	Clear sky but slightly hazy.
	Midnt.			·920	N. N. E.	2	
Parthenope	Noon			29·915	N.		A. M. Light breeze and hazy weather.
	4 P. M.	Passing Saugor	Island.		Calm.		P. M. Wind unsteady with gusts and calms. Midnight. Wind north and light.

The observations given in the ships' logs, although not numerous, confirm the information of the land observations given above.

The Frank Stafford and Kwang Tung, north of Lat. 20° N. and near the Head of the Bay, met with light northerly winds or calms and a smooth sea. The Mount Stuart and Scottish Hill were passing very slowly up the Bay at this time. The former was in Lat. 13° 56′ N. and Long 91° 31′ E., and observed several of the evidences of cyclonic formation in its neighbourhood. The area of heavy rainfall, as already noticed, had contracted. This explains the fact mentioned in her log that in the morning there were only a few light clouds in the sky. The weather, however, rapidly changed during the day, and became squally in the afternoon. Sharp squalls were experienced at sunset. The barometer was also falling rather rapidly. Winds were from north, and increased in strength from 1 to 4 during the day, indicating the rapid increase of indraught. The Scottish Hill was 120 miles further to the west, and had winds ranging between N. E. and N. W. during the day. They were very light and variable during the earlier part of the day, but the weather became squally towards the evening, and arched rain squalls passed over the ship at 8 P. M. The Satara, which was passing from Gopalpore to Rangoon, was in Lat. 17° 56′ N. and Long. 88° 45′ E. at noon. The winds varied during the day between N. N. E. and E. N. E., but decreased in strength during the afternoon. She experienced light breezes and fine clear weather throughout the day. The Chanda and Marhatta left Saugor in the evening, and had fine weather and a clear sky.

Hence, except in the neighbourhood of the Andamans, weather was fine. A definite cyclonic circulation had been established to the east of the Andamans between 10 A. M. of the 9th and 10 A. M. of the 10th. The area of rainfall had for some time contracted, and the rainfall had intensified over the diminished area. Winds of indraught had hence been established, and were increasing in force. This proceeded slowly at first, but, during the evening of the 10th and morning of the 11th, it went on more rapidly, and there was a perfectly well-defined cyclonic circulation, or large atmospheric whirl, established in that part of the Bay on the morning of the 11th November.

11th November.—During the previous 24 hours the barometer had risen rapidly over Northern and Central India. The increase of pressure was due to the filling up of the depression in the Punjab and neighbouring districts. The rise of the barometer at Peshawar and Rawal Pindi was ·2″. The depression had given a large amount of rain over the Punjab, and stormy weather over the north-west Himalayas, on the higher parts of which much snow had fallen. Amongst the heaviest rain-

falls during the previous 24 hours were the following:—Simla 2·15 inches, Peshawar 1·22 inches, and Rawal Pindi 1·20 inches.

The sky was overcast, and the weather unusually cold, in Upper India. The winds over a large part of Northern India continued to indicate feeble cyclonic circulation about a centre in the north-eastern districts of Sind. Over the whole of Bombay (excluding Sind), Bengal, the Central Provinces, and Central India, the weather was fine, skies cloudless, and the winds blowing from the usual quarter.

Round the coast of the Bay, from Saugor Island to Madras, the differences of pressure were unusually small. The following statement gives the 10 A. M. reduced readings at the more important stations:—

Saugor Island	29·940
False Point	29·955
Vizagapatam	29·945
Madras	29·948

The winds at the Bengal stations near the Head of the Bay blew from directions between north and north-east, the easterly component being probably due to the cyclonic circulation in the middle of the Bay. They were very light. On the Madras coast, the winds were not only more northerly than usual, but were unusually feeble. The data are given in the following table:—

Stations.	Amount of wind in miles per hour since 10 A. M. previous day.	Daily average amount of wind (miles per hour) of November.
Vizagapatam	1	2·5
Masulipatam	3	6·0
Madras	5	6·8
Negapatam	2	5·6
Salem	2	3·6
Madura	2	4·1

Over the Coromandel coast, the weather was fine with passing clouds, and rain had entirely ceased.

The following table gives the observations taken at the recording stations in the neighbourhood of the disturbance :—

Stations.	Barometer at 10 A. M. reduced to sea level.	Change since 10 A. M. previous day.	Wind direction.		Velocity in miles per hour since 10 A. M. previous day.	Cloud amount at 10 A. M.	Rainfall at 10 A. M. preceding 24 hours.	Weather.
			10 A. M.	4 P. M.				
Nancowry	29·836	— ·020	S. W.	S. W.	12	7	2·90	Fine.
Port Blair	29·760	— ·090	W. N. W.	W. S. W.	8	9	3·90	Overcast and rain.
Diamond Island	29·848	— ·069	E. N. E.	E. N. E.	12	10	1·12	
Chittagong ...	29·918	+ ·003	N. E.	W. N. W.	1	3		Fine.
Toungoo	29·860	— ·045	N. W.	N. W.	?	10		Gloomy.
Bassein	29·861	— ·056	N. N. E.	N. N. E.	5	10	1·24	Overcast.
Rangoon	29·913	— ·007	N. E.	N. E.	5	9	0·04	Showery.
Moulmein	29·855	— ·016	N.	E. S. E.	2	8	0·03	Fine.
Mergui	29·884	+ ·016	E. S. E.	E.	3	10	1·30	Overcast.

These observations show that the barometer had fallen considerably at Port Blair, and to a less extent at Nancowry and Diamond Island. The cause of this is also evident from the observations. Heavy rain had fallen at Port Blair and the neighbourhood. Port Blair registered 3·9 inches at 10 A. M., Nancowry 2·90 inches, and Diamond Island 1·12 inches. The rainfall on the Burmese coast was smaller than on the previous day. Hence the evidence indicates that the rainfall was more concentrated than hitherto, and was falling mainly over an area near to and including Port Blair. This is confirmed by the fact that cyclonic circulation of the air was now fully established. Winds were S. W. at Nancowry, E. S. E. at Mergui, E. N. E. at Diamond Island, and W. N. W. at Port Blair. They were increasing in force rapidly, but were as yet of moderate strength. The wind directions indicate that the centre of the cyclonic circulation was to the east-north-east of Port Blair. It is not possible to infer its position with any approach to exactness from the observations, but we are probably not far from the truth in placing it in Lat. 13° 30′ N. and Long. 94° 15′ E.

As the vessels which have contributed meteorological data were all to the west and north of the Andamans, they only furnish information

of the weather in the outer portion of the north-west quadrant of the cyclonic circulation.

The following table gives the whole of the information contained in their logs respecting the weather in the Bay on the 11th :—

Vessel.	Hour.	Latitude. N.	Longitude. E.	Probable reduced barometer.	Winds. Dir.	Winds. Force.	Remarks.
Scottish Hill	4 A. M.						Dirty rain squalls.
	8 A. M.				N. E.	4	No sea.
	Noon	14° 08′	90° 33′	29·850	to	4	Heavy rain squalls and hail.
	4 P. M.				N. W.	5	Cloudy, gloomy sky. 6 P. M. Heavy swell from N. E.
	8 P. M.				N. N. W.	2	Scud from N. E. and N. N. E.
	Midnt.			·870	N.	5	Wind shifting in squalls.
Mount Stuart	4 A. M.				E.N.E.	2 to 3	A. M. Moderate in the first part of the day Towards night, a heavy swell from E. by N. Thick heavy rain most of the day.
	8 A. M.				E. by N.	...	
	Noon	15° 30′	91° 06′	29·820	NNE to E	3 to 5	
	4 P. M.			·750	N. E.	...	Overcast heavy sky all round, and dark gloomy weather. Bent storm sails at 2 P. M. and kept away south, as weather was looking very bad. Heavy swell from E. N. E. at midnight.
	8 P. M.			·810			
	Midnt.				N. by E to N. by W.	Squally.	
Byculla	4 A. M.			29·880	N. E.		7 A. M. Moderate breeze and squally.
	8 A. M.			·890	E. N. E.		8 A. M. Overcast and squally with heavy rain.
	Noon	16° 00′	91° 10′	·840	...		Noon. Moderate breeze and overcast, with threatening appearance and rising sea. 4 P. M. Strong breeze and overcast, with frequent hard squalls. 8 P. M. Strong freshening breeze, with hard squalls and rising sea. Midnight. Moderate gale and heavy squalls.
	4 P. M.			·770	...		
	8 P. M.			·770	...		
	Midnt.			·740	...		

Vessel.	Hour.	Latitude. N.	Longitude. E.	Probable reduced barometer.	Winds. Dir.	Winds. Force.	Remarks.
Satara	4 A. M.			29·800	N. E.	4	4 A. M. Moderate breeze and overcast sky,
	8 A. M.			·850	N. E.	5	with passing squalls of wind. 8 A. M.
	Noon	16° 35′	92° 09′	·800	E. N. E.	6	Fresh breeze, sky cloudy and overcast.
	4 P. M.			·740	E. N. E.	6	Squally appearance. Black bank of clouds
	8 P. M.			·800	E.	6	rising to the East. 10 A. M. A gale of
	Midnt.			·780	E. by N.	6	wind from N. E. 11 A. M. Wind moderating. Noon. Strong head wind and mountainous sea. Shipping large quantities of water, vessel pitching and rolling. 4 P. M. Strong breeze and heavy sea, with severe squalls of wind, and incessant rain. 8 P.M. to midnight. Same weather continued.
Loanda	Noon	16°30′?	92° 0′?		N. E.	4 to 5	Weather overcast.
Bancoora ...	4 A. M.			29·902	E.	2	
	8 A. M.			·929	N. E.	3	
	Noon	17° 19′	85° 44′	·887	N. E.	4	Moderate wind and fine.
	4 P. M.			·838	N. N. E.	4	
	8 P. M.			·867	NE. by N.	4	
	Midnt.			·840	N. N. E.	4	
Chanda	4 A. M.			29·830	N. E.	2	Hazy.
	8 A. M.			·920	N. N. E.	4	
	Noon	18° 56′	90° 30′	·920	N. N. E.	4	Current N. 23° E. 0·5 mile per hour.
	4 P. M.			·750	N. E. to S. E.	2	
	8 P. M.			·770	Variable.	4	At short intervals, heavy squalls from S. E.
	Midnt.			·770	S. E. to E. by S.	5	Heavy squalls from the eastward.

Vessel.	Hour.	Latitude. N.	Longitude. E.	Probable reduced barometer.	Winds.		Remarks.
					Dir.	Force.	
Asia	Noon	18° 53′	84° 39′		N. E.		Moderate wind, clear weather.
Mahratta ...	4 A. M.			29·860	N. N. E.	4	
	8 A. M.			·920	...	4	
	Noon	21° 16′	90° 35′	·940	...	4	Fine weather, smooth sea, and clear sky throughout.
	4 P. M.			·800	N.	3	
	8 P. M.			·870	...	3	
	Midnt.			·900	...	2	

The Satara, Byculla, Mount Stuart, and Scottish Hill were now in directions varying between N. N. W. and W. N. W. from the centre and at approximately the same distance, 250 miles. The Satara was in Lat. 16° 35′ N. Long. 92° 9′ E. by account at noon, and proceeding eastwards to Rangoon. Early in the morning, the weather was fine with moderate breezes. Occasional squalls of wind passed over the vessel. The weather became rapidly worse after 8 A. M. A heavy and dark bank of clouds appeared in the east, and at 10 A. M. a gale of wind blew from north-east. The sea rose very rapidly. During the afternoon and evening, the vessel experienced strong easterly winds with frequent heavy squalls, incessant rain, and a heavy sea. The Satara was not only approaching the centre, but was crossing its line of motion in front. Hence the very rapid change of weather which she experienced during the afternoon.

The Byculla was about 70 miles to the W. S. W. of the Satara at noon in Lat. 16′ N. and Long. 91° 10′ E. Her positions, as obtained by observation and dead reckoning, agree so closely as to show that there was no strong current in the northern and western quadrants of the cyclone, and hence that the position assigned to the Satara by account is probably approximately correct. The Byculla was advancing in almost the same track as the Satara, and gives a similar account of the weather. The morning began with moderate breezes and occasional squalls. The sky clouded over about 8 A. M., and heavy rain fell. The winds increased in force, and frequent hard squalls passed over the ship.

The Log of the ship Mount Stuart, which was in Lat. 15° 30′ N. and Long. 91° 6′ E. at noon, states that the sky was overcast, weather dark and gloomy, and so threatening at 2 P. M. that the Captain changed her course and kept away south. The Scottish Hill was 100 miles to the south-south-west in Lat. 14° 8′ N. and Long. 90° 33′ E. at noon. The sky was overcast, and frequent heavy rain squalls passed over the ship. A heavy swell from the north-east came up during the day. The weather over the north-east of the Bay is described in the logs of the Chanda, Bancoora, and Mahratta. The Bancoora, in Lat. 17° 19′ N. and Long. 85° 44′ E. at noon, had fine weather and moderate north-easterly winds of force varying from 2 to 4 during the day. The Chanda, in Lat. 18° 56′ N. and Long. 90° 30′ E. at noon, had fine weather with a hazy atmosphere, and light to moderate north-east winds. She was proceeding to Rangoon, and steaming directly towards the northern quadrant of the cyclone. Late in the evening, she began to experience squally weather and variable winds. Frequent heavy rain squalls came up from south-east and east after 8 P. M. The Mahratta proceeding from Chittagong to Calcutta, and the light vessels at the entrance to the Hooghly, had fine weather, clear skies, and a smooth sea throughout the whole day.

The meteorological data hence shew conclusively that, during the 24 hours preceding 10 A. M. of the 11th, a definite cyclonic circulation of considerable intensity had been established to the west of the Andamans, the centre of which at noon of the 11th was probably in Lat. 13° 30′ N. and Long. 94° 15′ E. Heavy rain was falling over and near the centre, winds increased considerably in force during the day, the sea rose rapidly, and gave rise to a heavy swell extending to a distance of three or four hundred miles from the centre. The very rapid changes which had been initiated by the cyclonic motion are indicated very clearly by the weather experienced by the Satara.

12*th November*.—The barometric changes of the preceding 24 hours were irregular. This was in part due to the continuance of unsettled weather in Upper India. The depression which had formed on the 9th and 10th was filling up, and its existence was chiefly shewn on the morning of the 12th by cyclonic circulation of the air in Sind, and the adjacent districts of Rajputana. A smaller depression had, however, formed in the south-eastern districts of the Punjab, the centre of which was at or near Lahore. This was shown by a slight fall of the barometer at Lahore and the neighbouring stations. The barometer had continued to rise rapidly over the greater part of the Punjab, Rajputana, and the Central Provinces, and over the whole of Central and Southern India. A rapid fall had occurred in Burmah, and a slight one in Bengal, due to the development and extension of the atmospheric whirl in the neighbourhood of the Andamans.

In Upper India, skies were more or less clouded in the area of the small depression, and rain fell during the day over nearly the whole of the Punjab, and the western districts of the North Western Provinces. In Bengal, the Central Provinces, Bombay, and Madras, skies were generally clear, weather fine, and winds light. Skies were overcast in Southern Burmah, and rain was generally falling.

Over the west coast of the Bay, pressure was remarkably uniform, the isobar of 29·95 being, in fact, almost identical with the coast line. The winds on the Coromandel coast were stronger than they were on the previous day, but were below their normal force. This is shown by the following statement :—

Stations.	Amount of wind in miles per hour since 10 A. M. previous day.	Daily average amount of wind per hour.
Vizagapatam	2	2·5
Coconada	6	9·0
Masulipatam	2	6·0
Madras	5	6·8
Negapatam	5	5·6
Salem	2	3·6
Madura	4	4·1

The following are the observations taken at the stations affected by the cyclonic depression :—

Stations.	Barometer at 10 A. M. reduced to sea level.	Changes since 10 A. M. previous day.	Wind direction.		Velocity in miles per hour since 10 A. M. previous day.	Cloud amount at 10 A. M.	Rainfall at 10 A. M. preceding 24 hours.	Weather.
			10 A. M.	4 P. M.				
Nancowry	29·884	+ ·048	S. W.	S. W.	7	7	1·91	Fine.
Port Blair	29·834	+ ·074	W. S. W	W. S. W.	18	8	0·41	Overcast
Diamond Island	29·659	— ·189	E. S. E.	S. S. E.	25	10	4·58	Severe gale.
Akyab	29·887	?	N. N. E.	E. N. E.	?	10	...	Fine.
Chittagong	29·899	— ·019	Calm.	N. N. W.	1	6	...	Fine.
Toungoo	29·885	+ ·025	N. W.	N. W.	?	10	A.	Gloomy weather.
Bassein	29·762	— ·099	E. N. E.	E. S. E.	12	10	5·97	Overcast
Rangoon	29·870	— ·043	E. N. E.	S. E.	6	10	0·84	Showery
Moulmein	29·869	+ ·014	S. E.	S. E.	3	6	0·04	Clouds low with scud.
Mergui	29·936	+ ·052	E. S. E.	S. S. E.	4	10	0·50	Overcast

The following information relating to the meteorology of the Bay for the 12th is taken from the logs of the vessels named :—

Vessel.	Hour.	Latitude. N.	Longitude. E.	Probable reduced barometer.	Winds.		Remarks.
					Dir.	Force.	
Mount Stuart	4 A. M.			29·700	N. N. W.	5	
	Noon	14° 19′	91° 41′	·750	W. N. W.	5 to 6	A number of small land birds at about sunset. The moon has had a large ring round it the last few nights.
	4 P. M.				N. W.	5	
	Midnt.				N. W.	5	
Scottish Hill	4 A. M.			29·770	N. N. W.	5	4 A. M. Cloudy and rain squalls. Heavy sea from N.E.
	8 A. M.			·790	N. N. W.	4	8 A. M. Heavy rain squalls, sky thick and gloomy, heavy sea from N. N. E. Noon.
	Noon	14° 36′	92° 17′	·720	N. W. to W. N. W.	10	Shift of wind to N. W. with heavy, fierce squalls. Sky one mass of heavy black clouds, and rain like a black wall to W.N.W.
	4 P. M.			·630	W. S. W.	10	2 P. M. Fierce squalls. Heavy bank of clouds to the N. W. and N. 5 P. M. Weather clearer, and squalls lighter. Heavy confused sea. Scud in dark masses from N. W. Midnight. Fresh squalls and heavy rain.
	5 P. M.			·660	W. S. W.		
	Midnt.			·720	SW by W	8	
Byculla	2 A. M.			29.730	E. N. E.		A. M. Freshening gale with very heavy squalls, blinding rain, and high head sea. Ship labouring heavily. 8 A. M. Strong gale with heavy squalls, and high N.E. sea. Shipping water fore and aft. Noon. Wind and sea increasing. Heavy gale, with overcast sky, and continual heavy squalls. Ship labouring heavily, and shipping heavy seas fore and aft.
	4 A. M.			·660	...		
	6 A. M.			·570	...		
	8 A. M.			·480	N. E.		
	10 A.M.			·480	...		
	Noon	16° 03′	92° 36′	·410	NE.by N.		
	2 P. M.			·380	N. N. E.		
	4 P. M.			·380	N. by E.		
	6 P. M.			·370	N. by W.		

Vessel.	Hour.	Latitude. N.	Longitude. E.	Probable reduced barometer.	Winds. Dir.	Winds. Force.	Remarks.
Byculla ..... (*Contd.*)	8 P. M.			29·370	N. N. W.		8 P. M. Heavy gale with terrific squalls from the North.
	10 P.M.			·390	N. W. to W. N. W.		
	Midnt.			·400	West.		Midnight. Weather moderating.
Satara	4 A. M.			29·710	NE. by E.		A. M. Strong gale from N. E. with heavy sea, accompanied with heavy squalls of wind, and incessant rain. 8 A. M. Hard gale, violent squalls, heavy rain, very thick weather. Noon. Wind and sea continued the same; heavy rain squalls. 4 P. M. to midnight. Strong gale from E. by N., Same wind and weather.
				·660	N. E.	9	
	8 A. M.			·650	...	9	
	Noon	16° 30′	93° 30′	·610	E. by N.	9	
	4 P. M.			·530	...	9	
	8 P. M.			·540	...	9	
	Midnt.			·520	E. S. E. S. E.	9	
Chanda	4 A. M.			29·710	E. to NE.		Morning. Heavy squalls from E. N. E. Sea rising fast; S. E. swell increasing rapidly. Noon. Strong gale with high cross sea. Weather having all the appearance of a cyclone.
	8 A. M.			·730	E.N.E. to N. E.		
	Noon	16° 31′	93 °09′	·640	N. E.		
	4 P. M.			·560	N. E.		Afternoon. Fierce gale and high sea, with hard squalls and heavy rain. Barometer falling slowly.
	8 P. M.			·610	N.N.E.		Evening. Terrific squalls and high sea.
	10 P.M.			·490			
	Midnt.			·560	N. N. W.		Cleared up a little, less rain and sea.
Bancoora ...	4 A. M.			29·798	N.	4	6 A. M. Squally appearance to northward.
	8 A. M.			·849	N.	5	
	Noon	16° 40′	89° 11′	·805	N.	5	2 P. M. Fresh breeze and squally with light rain. Heavy sea from E. and E. N. E.
	4 P. M.			?	N. N. W.	4	
	8 P. M.			·818	N. W.	4	
	Midnt.			·849	N. N. W.	4	

Vessel.	Hour.	Latitude. N.	Longitude. E.	Probable reduced barometer.	Winds.		Remarks.
					Dir.	Force.	
Loanda	Noon	16°45′?	91°46′?	29·700	E. N. E.	6	Heavy rain and sky overcast.
Asia	4 A. M.				N. E.	Moderate	Clear weather.
	8 A. M.				N. E.	Fresh.	
	Noon	17° 42′	87° 42′		N. E.	,,	Cloudy and confused swell.
	4 P. M.				N. E.	,,	Cloudy and heavy S.E. swell.
	8 P. M.				N. E.		Cloudy and heavy S.E. swell.
	Midnt.				N. E.	Strong.	Overcast and heavy easterly swell.

The observations at the land observatories indicate that the depression was to the north of the Andamans on the morning of the 12th. The centre had thus moved in a north-north-west direction since noon of the 11th. The barometer had risen considerably at Port Blair and Nancowry, and on the east coast of the Martaban Gulf. Strong winds continued at Nancowry and Port Blair, more especially at the latter station. The sky was cloudy at Nancowry, and was still very dark and gloomy at Port Blair. Moderate rain had fallen during the preceding 24 hours at these stations.

A very considerable fall of the barometer had occurred in South West Burmah, more especially at Diamond Island and at Bassein. The winds were unusually strong at Diamond Island. The observer at that station reported a severe gale at 10 A. M. Very heavy rain was also falling in South Burmah. Diamond Island registered 4·58 inches at 10 A. M., and Bassein, 5·97 inches. On the Arakan coast, the weather at 10 A. M. was fine with passing clouds, and light N. N. E. winds.

The position of the centre can only be roughly approximated from the land observations. It was evidently to the W. S. W. of Diamond Island and at no great distance. The information extracted from the ships' logs enables us to determine it with approximate accuracy. An examination of the positions of the vessels, as determined by observation and dead reckoning on the 12th and 13th, indicates, that the positions assigned to all the vessels, except the Satara, at noon of the 12th, may be accepted as approximately true. There appears to have been very little current in the western and

northern quadrants of the cyclonic area. The only marked current at this time in the Bay was in the eastern quadrant of the storm area, where the winds were strongest. This current was continued northwards along the west coast of Burmah. The Satara, which was nearest the coast, experienced a very strong northerly current, which carried her 171 miles to the northward and westward (N. 13° W.) between noon of the 11th and noon of the 14th. Her probable position at noon of the 12th, so far as can be determined from the wind direction and height of her barometer, was in Lat. 16° 30′ N. and Long. 93° 30′ E.

The Byculla, Satara, Loanda, and Chanda were all in the northern quadrant. The Byculla was nearest the centre, which apparently passed a short distance to the east of that steamer, late in the evening (about 8 P. M.) Early in the morning, she had a gale with very heavy squalls, blinding rain, and a high sea. The weather grew worse as she advanced southwards. At noon, she experienced a heavy gale with continual heavy squalls. The weather was at its worst about 8 P. M., when a heavy gale was blowing with terrific squalls. Her barometer (corrected) stood at that hour at 29·37, the lowest reading taken during the storm. The weather began to moderate at midnight, when she had westerly winds, and the storm was passing to the northward.

The Chanda also passed to the westward of the storm. She was at least 150 miles from the centre early in the morning of the 12th. At that time, heavy squalls from the E. N. E. passed over the vessel, and a swell came up from the south-east which increased rapidly. At noon, she had a fierce gale with hard squalls, and heavy rain. The barometer fell slowly, and the Captain at 4 P. M. judiciously changed the course of the vessel to the south-west, and thus kept clear of the storm centre. At 8 P. M., the squalls were terrific in force, and the sea very high. The barometer was at its lowest at 10 P. M., when the corrected reading was 29·49. The wind at that hour was hauling from N. N. E. to N. N. W. Shortly afterwards, the weather began to moderate.

The Satara was to the north of the centre during the day, and crossed from the western to the eastern quadrant. She, consequently, not only experienced the full force of the hurricane, but was carried a considerable distance to the northward by the current, and thus involved in it for a much longer time than either of the preceding vessels. Early in the morning, she had a strong gale from the N. E. with heavy squalls, incessant rain, and a high sea. She continued to experience similar weather during the day. The wind, which was from N. E. at 4 A. M., shifted to E. by N. at noon, and to S. E. at midnight. She was, judging from the unusually small rise of her barometer between 4 P. M. and 8 P. M., probably nearest to the centre between 8 P. M. and midnight. Her low-

est reading is not given, but when corrected, it probably slightly exceeded 29·5. She was about the same distance as the Chanda from the centre The Mount Stuart and Scottish Hill were in the south-west quadrant, but at considerable distances from the centre. The former, which was in Lat. 14° 19′ N. and Long. 91° 41′ E. at noon, had winds of force 5 to 6 during the day. The Scottish Hill was nearer to the centre. During the morning, she had cloudy weather with rain squalls, and a heavy sea. Occasional shifts of wind occurred in heavy squalls, which passed over the vessel from the N. W. She was just on the margin of the storm area. The force of the wind varied from 4 to 5. The Captain describes the appearance of the cyclone area crossing to the N. W. in front of his ship as a mass of heavy black cloud and rain. During the remainder of the afternoon, fierce squalls passed over the vessel. The wind was of force 10, and hauled to W. S. W. at 4 P. M. The weather moderated a little afterwards, but she continued to have fresh squalls, heavy rain, and a high confused sea, during the remainder of the night.

The Asia was about 400 miles to the W. N. W. in Lat. 17° 42′ and Long. 87° 42′ E. at noon. She had fresh to strong N. E. winds during the day, and a heavy swell from the S. E. The Bancoora was 260 miles to the W. N. W. in Lat. 16° 40′ N. and Long. 89° 11′ E. She had northerly winds of force 5 until noon, and N. N. W. winds of force 4 during the remainder of the day. The weather had a squally appearance in the morning. As she advanced eastward, a heavy swell set in from the E. and E. N. E., which increased during the day. The logs of the Bhandara and of the light vessels near the mouth of the Hooghly show that light northerly winds were blowing at the Head of the Bay, and that the weather was fine, sky clear, and sea smooth.

A comparison of the position of the vessels at noon with respect to the storm indicates that the centre was approximately in Lat. 15° 30′ N. and Long. 93° E. at noon.

On this supposition, the following were the distances and bearings of the vessels from the storm centre at noon :—

	Bearing of centre of storm.	Distance of centre of storm.	Barometer at noon.
Diamond Island	E. N. E.	90	29·64
Byculla	N. N. W.	45	29·41
Chanda	N.	75	29·64
Satara	N. E.	75	29·61
Scottish Hill	S. W.	85	29·72
Mount Stuart	S. W.	120	29·75
Bancoora	W. N. W.	260	29·81
Asia	W. N. W.	400	?

13th November.—The chief feature in the meteorology of India on the 13th was the cyclonic disturbance off the Burmese coast. A rapid rise of the barometer during the preceding 24 hours over the Punjab and Sind, completely obliterated the barometric depression in that area. Pressure was highest over the Indus valley, where it slightly exceeded 30·15″. The barometer had also risen in the Central Provinces, Bombay, and Madras, but had decreased in Bengal and Arakan. Hence pressure diminished from west to east, and was lowest at Diamond Island, where it was 29·826″.

The large depression off the Burmese coast was very distinctly marked. Winds were blowing a southerly gale in the Gulf of Martaban. They were easterly at Akyab, northerly in Bengal and on the Ganjam and Madras coasts, thus establishing general cyclonic circulation over the Bay. Elsewhere the winds were generally from the eastward, except in the Indus valley, where they were northerly.

The sky was dull and cloudy in the Punjab, and moderate rain had fallen during the previous 24 hours. The sky, however, rapidly cleared during the day, and was almost free of cloud by 4 P. M. Over the remainder of the Indian land area, excepting Burmah, the sky was clear and the weather fine. The following table gives the more important meteorological observations taken at the land stations :—

Stations.	Barometer at 10 A. M. reduced to sea level.	Change since 10 A. M. previous day.	Wind direction.		Velocity in miles per hour since 10 A. M. previous day.	Cloud amount at 10 A. M.	Rainfall at 10 A. M. preceding 24 hours.	Weather.
			10 A. M.	4 P. M.				
Nancowry	29·940	+ ·056	S. W.	S. W.	3	7	0·83	Fine.
Port Blair	29·896	+ ·062	W. S. W.	W. S. W.	10	5	0·15	Fine.
Diamond Island	29·826	+ ·167	S.	S.	29	10	1·47	Severe gale.
Akyab	29·863	— ·024	E. N. E.	N. N. E.	5	10	0·59	Showery.
Chittagong ...	29·855	— ·044	N.	Calm.	1	9	...	Sultry.
Tounghoo	29·881	— ·004	N. W.	N. W.	?	10	0·42	Threatening weather.
Bassein	29·830	+ ·068	E. S. E.	S. S. E.	18	10	5·90	Overcast.
Rangoon	29·887	+ ·017	E. S. E.	S. S. E.	9	8	2·42	Constant rain.
Moulmein	29·902	+ ·033	S. S. E.	S. S. E.	3	3	1·11	Constant rain.
Mergui	29·943	+ ·007	S. E.	Calm.	2	5	0·30	

The information extracted from the logs of vessels affectedt i> cyclonic disturbance off the Burmese coast is given in the ensuing statement :—

Vessel.	Hour.	Latitude. N.	Longitude. E.	Probable reduced barometer.	Winds.		Remarks.
					Dir.	Force.	
Shazada.....	8 A. M.	13° 14′	94° 00′	29·836	S. by E.	Strong.	
	Noon	13° 51′	93° 57′				Cloudy and overcast.
	4 P. M.			·714	S.		
Mount Stuart	4 A. M.				N. W.	5	Sea heavy from N. E. by N. It was more northerly towards noon. 2 P. M. Showery. 4 P.M. Heavy detached clouds. 5 P. M. Dull heavy sky, with bright pink colour at sunset.
	8 A. M.			29·870	...	5	
	Noon	14° 47′	91° 20′		W. N. W.	5	
	4 P. M.			·740	...	5 to 6	
	8 P. M.				...	5	
	Midnt.			·800	vble.toW	5	
Asia	4 A. M.				N. E.	Moderate.	Cloudy, heavy easterly swell, and squally.
	8 A. M.				N.	Fresh.	Overcast and heavy N. E. swell.
	Noon	15° 54′	90° 58′		...	...	Squally, overcast, heavy N. E. swell.
	4 P. M.				N. W.	Moderate.	Overcast, N. E. swell going down.
	8 P. M.				W.	...	Moderate breeze and overcast. Swell gone down.
	Midnt.				SW by W	Steady.	Moderate breeze and cloudy.
Loanda	Noon	16° 16′	92° 54′	29·500	N. E.	10	Gale increasing.
	Midnt.						A hurricane.
Scottish Hill	8 A. M.			29·750			Noon. Heavy rain squalls.
	Noon	15° 56′	92° 10′	·720	W. by S.	9	6 P. M. Scud flying fast from N. W. Severe squalls and heavy sea. 10 P. M. Weather clearer, sea lighter, squalls less violent.
	4 P. M.			·700			
	6 P. M.			·680			
	8 P. M.				W. by S.	10	
	Midnt.			·790			

Vessel.	Hour.	Latitude. N.	Longitude. E.	Probable reduced barometer.	Winds. Dir.	Winds. Force.	Remarks.
Chanda	4 A. M.			29·610	NNW. to W. N. W.		Wind and sea going down. At short intervals, terrific squalls attended by heavy rain.
	8 A. M.			·650	WNW. to S. W.		
	Noon	16° 02′	93° 11′	·670	S. S. W.		Strong wind and heavy rain squalls.
	4 P. M.			·690	S. S. W.		Strong breeze and cloudy. Occasional heavy squalls.
	8 P. M.			·790	S. E.		
	Midnt.			·770	SE. by S.		Strong increasing breeze, and cloudy weather.
Byculla	2 A. M.			29·440	W.		Heavy gale with dark overcast sky. Wind veered to S. W., increased and blew with great violence in terrific squalls with rain. High confused sea.
	4 A. M.			·450	S. W.		
	6 A. M.			·460	...		
	8 A. M.			·510	S. S. W.		8 A. M. Heavy gale with terrific squalls from S. W. to S. S. W. High confused sea. Shipping heavy water fore and aft. 11 A. M. Weather moderating, but sea very confused. Noon. Wind and sea moderating. Squalls less frequent and not so hard.
	10 A. M.			·520	...		
	Noon	16° 10′	93° 11′	·560	...		
	2 P. M.			·580	S. W.		
	4 P. M.			·660	...		
	6 P. M.			·720	...		
	8 P. M.			·780	...		8 P. M. Strong breeze and overcast, with sharp squalls and heavy rain, high sea still running. Midnight. Fresh breeze with passing squalls. Sea going down.
	10 P. M.			·810	...		
	Midnt.			·830	...		
Satara	4 A. M.			29·520	S. E.	8	4 A. M. Fresh gale, violent squalls of wind and rain, heavy head sea. 8 A. M. Strong gale, violent squalls, heavy rain. 10-45 A. M. Wind shifted to S. by E. Noon. Strong gale
	8 A. M.			·630	...	9	
	Noon	16° 20′	93° 30′	·680	S. E.	9	
	4 P. M.			·670	S. E.	8	

Vessel.	Hour.	Latitude. N.	Longitude. E.	Probable reduced barometer.	Winds. Dir.	Winds. Force.	Remarks.
Satara ..... *(Contd.)*	8 P. M.			·730	...	8	from S. E. Violent squalls of wind and rain. 4 P. M. Fresh gale, violent squalls of wind and rain. Sea moderating. Water had a greenish tint. 6-30 P. M. Fresh gale, thick weather, with violent squalls.
	Midnt.			·750	S by W to S. E.	8	
Bancoora ...	4 A. M.			29·828	N. W.	7	6-15 A. M. Tremendous heavy sea from N. E. 10 A. M. Lulls and very heavy squalls and rain. 7 P. M. Clearing somewhat, wind and sea moderating, vessel at times rolling fearfully.
	8 A. M.				W. N. W.	7	
	Noon	16° 31′	91° 55′	·770	W. N. W.	6	
	4 P. M.				West	7	
	8 P. M.				W. S. W.	4	
	Midnt.			30·049	W.	3	
Mahratta ...	Noon	22° 00′	91° 44′	29·910	S. W. to S. E.	1	4 P. M. Slight swell from S. E. To eastwards, dense heavy clouds; to westwards, sky clear near the horizon; to northwards, light fleecy looking clouds, apparently motionless. Midnight. Sky completely overcast, with occasional rain and heavy swell.
	4 P. M.			·760	E.	2	
	8 P. M.			·780	N. E.	3	
	Midnt.			·780	E. N. E. to N. E.	5	

The observations taken at the land stations show that the barometer had risen rapidly at Diamond Island, moderately at Bassein, Port Blair, and Nancowry, and very slightly at Mergui and Rangoon. It was falling slowly at Akyab and Chittagong, in front of the storm area.

Winds were much lighter at Nancowry and Port Blair, but were unaltered in direction, and continued to give moderate rain. They had veered to S. S. E. in Burmah, except at Diamond Island, where they were from the south. A severe gale of wind had prevailed at that station during the previous 24 hours, but was beginning to moderate. Heavy rain had been brought up by the southerly winds into South Burmah. Bassein received 5·9 inches, Rangoon 2·4, and Diamond Island 1·47 during the previous 24 hours.

The land observations are not sufficient to enable the position of the centre of the storm at this time to be inferred. The slight shift of wind at Diamond Island, the considerable rise of the barometer at that station, and the very small fall at Akyab, indicate that the storm was being largely influenced and retarded by the action of the Burmese and Arakan hills. The southerly winds in the easterly quadrant, instead of passing mainly over a water surface, were now blowing partly over South Burmah. The friction between the winds and the earth's surface, and the action of the hills in breaking up and disintegrating the rotatory or vorticose motion of the air, evidently account for the change which was taking place, and which is more clearly shown by the ships' observations.

The Satara was in the north-east quadrant. Her position at noon was probably about Lat. 16° 20′ N. and Long. 94° E. She was between the storm centre and the Burmese coast, and received the full weight of the southerly winds during the day. She had strong gales with violent squalls and heavy rain during the whole day, and the weather only began to moderate about 8 P. M., after which she had a fresh gale with thick weather and heavy squalls.

The position of the Loanda is slightly doubtful. She was almost in front of the cyclonic centre, probably a few miles only to the west. She had north-easterly winds of force 10 at midday. The storm increased, and at midnight was blowing a hurricane. Her barometer at midday (corrected) was 29·5.

The Byculla was in the south-east quadrant. She had crossed the path of the centre on the previous evening at about 11 P. M., and steamed away to the east during the day. Early in the morning, she was near the centre, and received the full weight of the south-westerly winds. The wind veered to south-west shortly after midnight, and blew with great violence; terrific squalls of wind and rain passing over the ship at intervals. At 8 A. M., the wind blew a heavy gale with terrific squalls from S. S. W. and S. W., bringing up a high confused sea. Weather began to moderate after 11 A. M., and in the afternoon, when the vessel was probably 200 miles away from the storm centre, she experienced fresh breezes with passing squalls. The barometer rose rapidly and continuously during the day from 29·44 at 2 A. M. to 29·83 at midnight.

The Chanda and Bancoora were passing early in the morning through the south-west and south quadrants of the depression. The Chanda experienced terrific squalls with heavy rain. The winds commenced at W. N. W., and hauled round to S. W. at 8 A. M. As she advanced south-eastwards during the afternoon, the weather improved, and wind shifted round to S. E., when strong breezes with occasional squalls and cloudy weather prevailed.

The Bancoora was further to the westward, and hence did not encounter such strong winds as the Chanda. During the day, the winds gradually shifted from north-west to west, and were of average strength 7. Very heavy squalls of wind and rain passed over the vessel, and a tremendous heavy sea came up from north-east early in the morning. As the storm centre passed to the northwards, and the vessel proceeded eastwards, the wind and sea moderated.

The remaining vessels were at greater distances away. The Scottish Hill to the W. S. W. of the centre (in Lat. 15° 56′ N. and Long. 92° 10′ E.) had very heavy rain squalls (force 9 to 10) during the day. The weather began to clear at about 10 P. M.

The Asia, in Lat. 15° 54′ N. and Long. 90° 58′ E. at noon, was proceeding south-eastward to Port Blair, and passed through the outer part of the south-westerly quadrant. She had squally overcast weather with a heavy N. E. swell during the day. At midnight, she had steady, moderate S. W. breezes with cloudy weather. The Mount Stuart was in the west and south-west quadrants, and experienced moderate winds of force 5, with occasional squalls.

The Mahratta, between Chittagong and Akyab, had light variable winds, and fine weather, during the early part of the day. The sky clouded over and was overcast at night, when rain began to fall, and a heavy swell to come up. The Bhundara, off Gopaulpore, had light airs or calms, and a clear sky.

Assuming the position for the storm centre at noon to have been in Lat. 16° 10′ N. and Long. 93° E., the following table gives its position with respect to the vessels near it :—

Names of Vessels.	Position. Longitude. N.	Position. Latitude. E.	Direction of storm centre from vessel.	Distance of storm centre from vessel.	Barometer at Noon.
Loanda	16° 16′	92° 54′	N. N. W.	9	29·50 ?
Chanda	16° 02′	93° 11′	E.	15	29·69 ?
Byculla	16° 10′	93° 11′	E.	12	29·56
Satara	16° 20′	93° 30′	E. N. E.	35	29·68
Scottish Hill	15° 56′	92° 10′	W.	56	29·72
Bancoora	16° 31′	91° 55′	W.	74	29·77
Mount Stuart	14° 47′	91° 20′	S. S. W.	140	29·85
Asia	15° 54′	90° 58′	W.	130	29·85
Mahratta	21° 59′	91° 44′	N. N. W.	400	29·91
Bhundara	Off Gopaulpore.		W.	...	29·89

14th November.—The only feature of importance in the meteorology of India was the depression off the Arakan and Burmese coasts. Pressure was again giving way quickly over the Punjab, and to a less extent in all other parts of the country, except at a few stations in Bombay, South Madras, and in Arakan. The highest pressure (30·1) was over Sind, and the lowest (29·69) in Arakan at Akyab. Gradients were not steep, except in and near the cyclonic disturbance. The storm centre in the Bay was approaching Akyab at 10 A. M. The weather was overcast with heavy rain in Burmah and Arakan. A considerable increase of cloud had taken place in Lower Bengal. The sky had cleared in the Punjab and North-west Himalaya, and weather was fine over the whole of India, except in the immediate neighbourhood of the cyclonic disturbance. The winds were more northerly than usual in Northern India. In Bengal and on the Madras coast, winds were blowing chiefly from the north west. They were, however, as during the previous week, light in the neighbourhood of the Madras coast.

The following tables give the observations relating to the weather of the 14th taken at the land stations in the neighbourhood of the cyclonic disturbance, and the meteorological information extracted from the logs of vessels :—

Stations.	Barometer at 10 A. M. reduced to sea level.	Change since 10 A. M. previous day.	Wind direction.		Velocity in miles per hour since 10 A. M. previous day.	Cloud amount at 10 A. M.	Rainfall at 10 A. M. preceding 24 hours.	Weather.
			10 A. M.	4 P. M.				
Nancowry	29·921	— ·019	S. W.	S. W.	2	8	0·63	Cloudy.
Port Blair	29·924	+ ·028	W. N. W.	S. S. E.	6	6	0·61	Cloudy.
Diamond Island	29·898	+ ·072	S.	S.	17	7	0·64	
Akyab	29·692	— ·171	N.	W.	8	10	2·44	Raining.
Chittagong ...	29·772	— ·083	N. W.	W.	1	8	...	Gloomy.
Toungoo	29·866	— ·015	N. W.	S. W.	?	10	0·15	Showery.
Bassein	29·922	+ ·092	W. S. W.	S.	14	10	1·42	Overcast.
Rangoon	29·921	+ ·034	S.	S. S. W.	8	10	0·83	Drizzling.
Moulmein	29·913	+ ·011	S. E.	W.	4	1	0·33	Fine.
Mergui	29·948	+ ·005	N. E.	N.	1	8	1·55	Cloudy.

Vessel.	Hour.	Latitude. N.	Longitude. E.	Probable reduced barometer.	Winds. Dir.	Winds. Force.	Remarks.
Asia	4 A. M.				S W by S.	Moderate.	Moderate breeze and fine weather during the day.
	8 A. M.				S. S. W.		
	Noon	13° 26′	93° 27′		...	...	
	4 P. M.				S.	Light	Light breeze.
Shazada.....	8 A. M.			29·841	W. N. W.	Moderate.	
	Noon	14° 05′	90° 50′				
	4 P. M.			·758	N. N. W.	Light	
Chanda	4 A. M.	15° 27′	95° 15′	29·860	S. S. W.	5	Clear weather.
	8 A. M.			·860	S. S. W.	3	
Bancoora ...	4 A. M.			29·927	W. S. W.	3	4 A. M. Heavy northerly sea. Ship rolling heavily. 6 A. M. Moderate breeze, heavy confused sea, ship rolling violently. Noon. Pleasant breeze and cloudy.
	8 A. M.			...	W. S. W.	3	
	Noon	15° 51′	93° 50′	·899	S. E.	3	
	4 P. M.			·812	S.	3	
	8 P. M.			·907	E. S. E.	2	
	Midnt.			·897	S. E.	2	
Mount Stuart	4 A. M.				Varies to W.	5	Heavy cross N. N. W. to N.N.E. sea which gradually abated. A flash of lightning ahead at 3 A. M. Passing clouds, weather gradually getting finer looking. Passed through lots of bamboo roots to-day. Fine moonlight night.
	Noon	15° 51′	91° 30′	29·890	...	5	
	4 P. M.				N. W.	3	
	8 P. M.				...	2	
	Midnt.				N. N. W.	1 to 2	
Byculla	2 A. M.			29·780	S. W.		2 A. M. Fresh breeze and cloudy.
	4 A. M.			·760	...		
	6 A. M.			·820	...		4 A. M. Moderate breeze and cloudy, with passing squalls. 7 A. M. Water very much discoloured, muddy appearance, bottom 28 fathoms. Moderate breeze and cloudy, light passing squalls. 0-40 P. M. Sighted Alguada Light House to S. E. 1-30 P. M. Light breeze and fine with smooth water.
	8 A. M.			·860	S.		
	10 A. M.			·890	...		
	Noon	15° 58′	93° 58′	·890	...		
	4 P. M.			·880	S. W.		
	8 P. M.			·920	S. S. W.		
	Midnt.			·950	S. S. E.		

Vessel.	Hour.	Latitude. N.	Longitude. E.	Probable reduced barometer.	Winds. Dir.	Winds. Force.	Remarks.
Satara	4 A. M.			29·730	S. S. E.	7	Moderate gale accompanied with heavy squalls of wind and rain. 4 A. M. Strong breeze with heavy squalls. 5 A. M. Very dirty weather, wind moderating, very heavy squalls, and sharp rain. 6-30 A. M. Sighted land. 8 A. M. Strong breeze and thick dirty weather. 10 A. M. Fresh breeze, weather clearing up generally, occasional heavy squalls. Noon. Light breeze and fine. Sea smooth. 4 P. M. Light breeze and fine, 8 P. M. Sighted Alquada Reef Light. Moderate breeze and fine. Sea smooth. Midnight. Light breeze and fine.
	8 A. M.			·850	S. S. W.	6	
	Noon	16° 45′	94° 3′	·880	...	2	
	4 P. M.			·730	...	2	
	8 P. M.			·900	...	4	
	Midnt.			·900	S. W.	2	
Scottish Hill	4 A. M.			29·820	W.		Sky clearing. Sea lighter, though much confused. Heavy sea from N. N. W. and N. Weather fine, but heavy bank of clouds to N. N. W. and N. N. E. Sea going down fast. Clouds clearing off.
	8 A. M.			·870	...		
	Noon	17° 00′	92° 25′	·880	...		
	8 P. M.				W. N. W.		
	Midnt.			·890	N. W.		
Loanda	4 A. M.						Wind hauled round through N.
	Noon	17° 34′	92° 46′		W.	7 to 8	Weather overcast with light rain.
	Midnt.						Weather improving.
Mahratta ...	4 A. M.			29·590	N. N. E.	9	Thick continual rain, with heavy sea
	8 A. M.	Entered Akyab.		·740	N. N. W.	8	

* A current set the ship from noon of 11th instant to noon of 14th instant N. 13° W. 171 miles.

The barometer had risen at Diamond Island and all the stations to the south and east, except Nancowry, where a slight fall was observed.

The rise was nowhere large, and was less than a tenth of an inch at all stations in that part of the Bay. A considerable (·17″) fall had occurred at Akyab, and smaller changes of the same character at Chittagong and Toungoo. Judging from the barometric movements, the centre at 10 A. M. was in the immediate neighbourhood of Akyab.

The wind observations, however, are anomalous and almost unintelligible on the supposition of a well defined cyclonic circulation. The winds at Nancowry were steady from south-west, but were very feeble. At Port Blair, the wind was very unsteady, shifting from W. N. W. at 10 A. M. to S. S. E. at 4 P. M. Moderately strong S. W. winds continued at Diamond Island. The winds at 10 A. M. at Akyab were from N. and at Chittagong and Toungoo from N. W. They shifted at 4 P. M. to west at Akyab and Chittagong, and to S. W. at Toungoo. They were, however, very feeble at all these stations. The wind velocity averaged 8 miles per hour at Akyab, and only 1 mile per hour at Chittagong, where the air motion was actually less than the average in November, which is 2 miles per hour. The only inference from these observations is, that the cyclonic or vorticose motion had been broken up to a large extent by the action of the hills and the friction of the land, and that it was no longer a well-defined cyclonic circulation. This is also indicated by the character of the rainfall at the land stations. It was more widely distributed than before, and was smaller in amount, the largest quantity registered being 2·44 inches at Akyab.

The vessels which have contributed logs were all on the southern and western quadrants at some distance from the centre. They give information which is less valuable and conclusive than that of the preceding days. The whole of the meteorological observations, when charted, indicate that the centre of the barometric depression at 10 A. M. was to the east of Akyab in Lat. 20° N. and Long. 93½° E., and that the cyclonic circulation was very irregular and fast breaking up. The Mahratta, from Chittagong, entered Akyab harbour at 8 A. M. She had thick continued rain during the night with northerly winds of force 9. The Scottish Hill, in Lat. 17° N. Long. 92° 25′ E., was to the south of the centre at noon. She had winds from west to north-west. During the day, the sky cleared, and the sea went down. At noon, weather was fine, although a heavy bank of clouds was still to be seen to the N. N. W. and N. N. E., but it cleared off during the night.

The Loanda, in Lat. 17° 34′ N. and Long. 92° 46′ E. by account, had westerly winds, and overcast skies with slight rain.

The Satara found herself at noon in Lat. 16° 45′ N. and Long. 94° 3′ E. She experienced moderate winds of force 7 from S. S. E. early in the morning, and continued to have sharp squalls and heavy rain until

6 A. M., after which the weather rapidly improved. A fresh breeze was blowing at 10 A. M. with occasional heavy squalls. At noon, the storm was completely over, and she had light breezes of force 2 from the S. S. W., fine weather, and a smooth sea.

The Mount Stuart, in Lat. 15° 51′ N. Long. 91° 30′ E. at noon, had westerly winds of force 5 early in the morning, with a heavy cross sea. The weather improved rapidly, and was quite settled in appearance at night, with fine clear skies and light winds of force 1 to 2. The Byculla, Bancoora, and Chanda were steaming along the south coast of Burmah towards Rangoon. They had fine weather with south-westerly winds of average force 3.

It thus appears that the first action of the Burmese hills, which are comparatively low, had been to retard the advance of the centre very considerably between noon of the 12th and of the 13th. During the next 24 hours, it advanced rapidly almost due northwards with a very slight easterly tendency. It then approached the coast to the east of Akyab on the morning of the 14th. The depression was, however, very much smaller than hitherto, and the cyclonic motion very considerably broken up. The winds were irregular in direction near the centre. The rainfall was evidently much less in amount, and more widely distributed. The observations taken at Akyab and Chittagong at 4 P. M. shew that the disturbance was then almost completely disintegrated. There was at that hour an irregular, but very feeble, cyclonic circulation, which passed away before the following morning.

15th November.—The meteorology of the 15th is given to show how completely the cyclonic disturbance had broken up.

The barometric changes of the previous 24 hours were exceedingly irregular. The only important change was in Arakan, where the barometer had risen very rapidly with the disappearance of the cyclonic disturbance. The winds show very little alteration generally. In the North-West Provinces and Punjab, they were very variable. In Bengal and Orissa, they had a much stronger northerly component than is usual in November. The weather was fine, and skies were clear over nearly the whole country, except Burmah and Arakan, where they were still more or less clouded, and moderate rain was falling. In the Punjab, though the sky was generally clear and humidity decreasing, the weather still appeared unsettled. The exceptional character of the weather in the Punjab during the previous week, is illustrated by the fact that the average rainfall of the hill stations at Simla and Chakrata for the month of November is *nil*, whilst, during the previous fifteen days, four inches had fallen at the former station, and $3\frac{1}{2}$ inches at the latter.

The following tables give the observations of the same stations as hitherto, and the meteorological information from the logs of several vessels in the Bay for the 15th November:—

Stations.	Barometer at 10 A. M. reduced to sea level.	Change since 10 A. M. previous day.	Winds.		Velocity in miles per hour since 10 A. M previous day.	Cloud amount at 10 A. M.	Rainfall at 10 A.M. preceding 24 hours.	Weather.
			10 A. M.	4 P. M.				
Nancowry	29·889	— ·032	E.	S.	2	8	1·47	Cloudy.
Port Blair	29·932	+ ·008	N. N. E.	E. S. E.	5	3	0·13	Fine.
Diamond Island	29·937	+ ·039	E. S. E.	E. S. E.	7	6	0·16	Fine.
Akyab	29·937	+ ·245	E.	S. S. E.	5	9	0·33	Gloomy.
Chittagong ...	29·925	+ ·153	S. S. E.	S. S. W.	2	6		Gloomy.
Tounghoo	29·913	+ ·047	N. W.	N. W.	?	6	0·04	Drizzling.
Bassein	29·952	+ ·030	S. S. E.	W.	3	10	0·04	Cloudy.
Rangoon	29·952	+ ·031	S. E.	S. S. E.	5	9	0·74	Cloudy.
Moulmein	29·899	— ·014	N.	N. E.	2	0		Fine.
Mergui	29·920	— ·028	Calm.	N.	1	10	1·50	Overcast.

Vessel.	Hour.	Latitude. N.	Longitude. E.	Probable reduced barometer.	Winds.		Remarks.
					Dir.	Force.	
Shazada.....	4 A. M.			29·911	N. N. E.	Light.	Weather fine with light winds.
	8 A. M.						
	Noon	12° 47′	87° 14′				
	4 P. M.			·781	N. N. E.	Light.	
	8 P. M.						
Satara	4 A. M.			29·870	S. E.	2	Light breeze and fine clear weather.
	8 A. M.			·940	...	4	Moderate breeze and fine weather.
	Noon	15° 50′	95° 50′	·980	...	4	Current during the previous 24 hours, W. 65 miles.
	4 P. M.			·810	N. E.	2	Light breeze and fine weather.

Vessel.	Hour.	Latitude. N.	Longitude. E.	Probable reduced barometer.	Winds. Dir.	Winds. Force.	Remarks.
Asia	4 A. M.				Variable	Light	Light and variable airs, fine weather.
	Noon	Port	Blair.		...	...	
	4 P. M.				E. N. E.	Light	Light breeze and fine clear weather.
	8 P. M.				...	Fresh.	
Mount Stuart	4 A. M.				N. N. W.	1	1 P. M. Smooth with light N. swell. 4 P. M. Heavy clouds all round the horizon. 5 P. M. Weather settled looking.
	8 A. M.				N. by E.	1 to 2	
	Noon	16° 24′	92° 00′	29·890	N. N. E.	...	
	4 P. M.				NE by N	2	
	Midnt.				NNE to NE by N	2	Midnight. Clear fine weather.
Scottish Hill	8 A. M.				N. W.		Light winds and swell from N. N. W.
	Noon	18° 03′	92° 48′	29·900	...		
	8 P. M.				NNW to N.		Light winds and clear sky.
Loanda	Noon	18° 38′	92° 30′	29·800	W by N.	5	

The observations call for little remark. The rapid recovery of pressure at Akyab, and the lightness and irregularity of the winds in Arakan and Burmah, indicate the complete disappearance of the cyclonic vortex. The land observations show that the winds were very unsteady during the day. For instance, at Nancowry, they were from east at 10 A. M. and south at 4 P. M. Similarly, at Port Blair, they shifted from N. N. E. at 10 A. M. to S. S. E. at 4 P. M. It is probable that these were light local winds, for the logs of the vessels prove that, over the greater part of the Bay, north-easterly winds were again established. The Clan Macpherson, at the entrance to the Bay, in Lat. 6° N., had moderate north-easterly winds.

Hence the cyclonic circulation had not only broken up, but the south-westerly winds which had, as shown by the Nancowry registers, prevailed steadily up to the afternoon of the 14th, although they had decreased in strength considerably during the 12th, 13th, and 14th, had given way so

rapidly and entirely on the afternoon of the 14th, that light north-easterly winds were again established over nearly the whole of the Bay on the morning of the 15th. This speedy restoration of the normal circulation of the air after the disappearance of the disturbance, is perhaps less remarkable than it might seem to be, but is nevertheless noteworthy.

CHAPTER IV.

Discussion of the chief features of the Storm of November 10th to 15th.

The following gives a brief connected narrative of the more important features of the storm.

After the termination of the south-west monsoon in Bengal in the last week of September 1883, the winds shifted round to north over the Head of the Bay, and the lower air current of the south-west monsoon recurved over the middle of the Bay. The north-east monsoon hence commenced on the Madras coast during the first week of October. Unusually heavy rain fell over Southern India, more especially over the eastern districts of the Madras Presidency, during the month of October and the first week of November. During the whole of this interval, the period of the year when the most severe and extensive cyclones are known to occur, the Bay was entirely free from storms. In the beginning of the second week of November, the rainfall rapidly decreased in amount in Madras, and ceased entirely on the 9th and 10th. The logs of vessels shew that winds were, at that time, as they had been for some days previously, very light and variable in the neighbourhood of the Andamans and Nicobars. South-westerly winds were re-established at Nancowry on the 4th, and south-easterly winds at Port Blair on the 7th, but they were at first very weak.

The wind observations taken on board the ships Mount Stuart and Scottish Hill prove that, at the same time, winds were unusually light over the centre of the Bay, in the neighbourhood and to the west of the Nicobars and the Andamans. This condition of excessively feeble air motion was very marked on the 7th and 8th. On the 9th, there were indications for the first time of the occurrence of moderately heavy and localized rainfall to the north-east of the Nicobars, and to the east of Port Blair, and also of a shift of wind, significant of the commencement and establishment of cyclonic circulation. On the morning of the 10th, there was a well-defined atmospheric whirl to the east of Port Blair. Weather was at that time cloudy, with very light breezes, and occasional passing showers; and the sea was smooth, and free from any considerable current over the greater part of the Martaban Gulf, and the north and centre of the Bay.

The ship Kwang Tung, it may be remarked, passed, on the 7th and 8th, over the area in which the disturbance was generated; and there is not the slightest indication in her log, or in the observations of the neighbouring land stations, of the existence of any atmospheric whirl, large or small, at that time, or previous to the 10th. The central depression at noon on the 10th was very small, probably less than a tenth of an inch, and the atmospheric whirl, although clearly established, was as yet in an initial state. It, however, rapidly acquired increased energy during the afternoon of the 10th, and the morning of the 11th. At noon of the 11th, there was a well-defined cyclonic disturbance with its centre in Lat. 13½° N. and Long. 94¼° E., the barometric depression at which certainly exceeded ·3″. Strong winds were now blowing into it from the south, and bringing up much vapour. During the succeeding 24 hours, the centre moved to the north-westward through the channel separating Diamond Island and Cape Negrais from the Andaman Islands, and probably over the Coco Islands. Its centre, at noon on the 12th, was in Lat. 15½° N. Long. 93° E. The disturbance was of small extent, as vessels at distances of only 150 miles had light to moderate winds of force 3 to 5. The Satara, Byculla, and Loanda, all of which were near the centre, on the other hand, experienced squalls of terrific and hurricane force.

Hence it was at that time a small but well-defined atmospheric whirl or cyclonic disturbance. The winds and squalls near the centre were of the most violent character, the sea excessively high and dangerous, and the currents in the eastern quadrant considerable. During the next 24 hours, it retained the same characteristics, but moved very slowly to the north, so that, at noon, its centre was in Lat. 16° 10′ N. and Long. 93° E. The retardation of its motion was evidently due to the resistance of the land and hills in the eastern quadrant. The centre passed a few miles to the east of the Loanda and the Byculla on the evening of the 12th and morning of the 13th. The decrease in the indraught from the eastern quadrant due to the action of the Burmese and Arakan coasts continued. The whirl began to diminish in intensity, and also recurved slightly after noon of the 13th, and passed to the north-north-eastward, thus approaching the Burmese and Arakan coasts. On the morning of the 14th, it was much enfeebled. The barometric depression was smaller in amount, the winds weaker, the rainfall more diffuse and less localised, and the sea less violent. Moreover, the directions of the winds were so irregular over the area of barometric depression as to suggest the existence of several imperfect and feeble vortices, rather than of one large and well-defined whirl. The centre of the depression was in the neighbourhood of Akyab on the morning of the 14th. The land observations at 4 P. M. of that day

indicate that the cyclonic circulation was completely broken up, and that fine weather, with moderate winds, and a slight sea, obtained at that hour in the north-east of the Bay, over which the cyclone had previously advanced. The disturbance passed so completely away on the 14th that normal north-easterly winds were re-established over the greater part, if not the whole, of the Bay, on the morning of the 15th. The storm hence was generated and dispersed between the morning of the 10th and the evening of the 14th.

The following are a few of the more important points in connection with this cyclone.

One of the more remarkable features, which has already been discussed, but which deserves special mention, was the change which occurred when the cyclone approached the Burmese coast. Whatever the explanation may be, there can be no doubt of the facts.

The following table gives approximately the position of the centre at noon on the various days, and the distance passed over by it in the preceding 24 hours :—

	Position of Centre.		Distance passed over in preceding 24 hours.
	Latitude.	Longitude.	
11th	13° 30′	94° 15′	
12th	15° 30′	93° 0′	160 miles.
13th	16° 10′	93° 0′	47 „
14th	20° 0′	93° 30′	275 „

It will thus be seen that, between noon of the 12th and 13th, the storm centre began to recurve, and only advanced a distance of about 50 miles, as compared with 160 miles during the previous 24 hours, and 275 during the succeeding 24 hours. The only apparent explanation depends on what I have already suggested as probable, namely, that the cyclonic action extends through very different heights in different storms. In the storms of the rains proper, it is almost certain that the condensation, and therefore the seat of the disturbance, is at a much greater elevation than it is in storms formed during the October Transition period. In the latter case, the storms appear to be generated

near the northern limit of the retreating south-west monsoon current, which is at that period diminishing in strength. It is probably much shallower at its northern limits than elsewhere. Many of the phenomena of the cyclones of the Bay appear to be intelligible and explicable only on this supposition.

If it be granted that the October and November storms of the Bay of Bengal are formed near the northern edge of a diminishing and retreating current, it is hence almost certain that the vapour condensation, in the case of the November cyclone under discussion, occurred at a comparatively small height in the atmosphere, and that the resulting motion was mainly confined to the lower strata. Hence the effects due to friction with land, and to the destructive or disintegrating action of the hill barriers of Burmah and Arakan cutting almost radially across the cyclonic area, would be large and marked. This was undoubtedly the case. So long as the cyclone was to the south of the Burmah coast, the cyclone increased in intensity. When the centre was in a line with the coast, and at a short distance from it, retardation was at once shown, and the cyclonic or vorticose motion began to diminish. And as the centre advanced northwards, so that the Arakan hills (of greater height than the west Burmese hills) were included within the area of disturbance, the disintegrating action became rapidly more marked, and caused a speedy disruption of the vortex.

A feature which deserves special notice in the smaller cyclonic storms of the Bay is the behaviour of the barometer. The barometer affords practically no indication of the approach of a small cyclonic storm in the Bay, and should not be trusted by the mariner to give due warning. The reason of this is simple. A favourable condition antecedent to the formation of a storm is approximate uniformity of pressure over the whole or a large portion of the Bay. If a small atmospheric whirl be set up in an almost quiescent mass of air, which is therefore under nearly identical and uniform conditions, it produces a small depression at and near the centre, which extends slowly outwards. The fall of the barometer at distances of 80 or 100 miles from the centre is generally small in amount, and is frequently less than the changes due to general actions common to the whole of India. The depression at the centre rarely exceeds half an inch, and steep baric gradients are confined to its immediate neighbourhood. Over the rest of the Bay, the pressure is slightly affected by the indraught, but frequently not to such an extent as to obscure the changes going on over the whole of India. In other words, during the formation and existence of a small storm, the barometer immediately outside of the storm area proper oscillates in obedience to the larger atmospheric movements com-

mon to the whole of India, as well as to the distant storm, and hence, if used as a guide to the weather, it should be remembered that its indication may refer mainly to these general movements, and not to the whirl in the neighbourhood. Hence it cannot be used as a reliable guide to the existence of small storms in the Bay of Bengal.

A few examples from the present cyclone will not only indicate that the barometer gives no certain and marked warning of the approach of a smaller cyclone in the Bay, but suggest that the mariner in the Bay of Bengal should rely mainly on the appearance of the sky, the strength and changes of the wind, the amount of the swell, and the direction from which it travels, as indications of an approaching storm.

The Mount Stuart passed through the western quadrant. The following table gives her barometric readings, her position with respect to the storm centre, strength of wind, and amount of swell :—

	Barometer.	Wind.	Swell.	Distance of storm centre.	Weather.
7th	29·90	2 to 3	None	...	Unsettled.
8th	·92	1 to 4	None	...	Unsettled.
9th	·87	0 to 3	None	...	Unsettled.
10th ...	·86	0 to 4	None	...	Unsettled.
11th ...	·82	2 to 5	None	250	Weather looking very bad.
12th ...	·75	5 to 6	...	100	Squally.
13th ...	·87	5 to 6	Heavy sea.	125	Squally.
14th ...	·89	5 to 1	Heavy.	280	Fine.

The preceding table shows that, although she was within 100 miles of the centre of a storm between the 10th and 14th, the range of the barometer at noon during the whole interval was only ·14", or very little more than the diurnal range of the barometer in the Bay.

The Bancoora may be taken for another example :—

	Barometer.	Distance.	Wind.	Swell.	Weather.
11th ...	29·887	550	2 to 4	None.	Fine.
12th ...	·805	250	4 to 5	Heavy N. E. sea.	Squally.
13th ...	·770	70	3 to 7	Tremendous sea in the morning. Heavy sea during the afternoon.	Very squally
14th ...	·839	280	2 to 3	Heavy sea.	Improving.

The above shows that the Bancoora, which left the River Hooghly on the 11th, approached within 70 miles of the centre of the cyclone at noon of the 13th. She had heavy squalls and a tremendous sea, and yet the total range of her barometer, as determined by the noon observations, was only ·117", or actually less than the diurnal range of the barometer in the Bay.

The Satara furnishes equally strong evidence. She was for a considerable time in the eastern quadrant of the cyclone at no great distance from the centre, and hence felt the full force of the storm.

	Barometer.	Distance.	Wind.	Swell.	Weather.
10th ...	29·89		2 to 5	None.	Fine.
11th ...	·80	250	4 to 6	Heavy sea.	Gale. Heavy squalls.
12th ...	·61	90	9	Heavy sea.	Hard gale.
13th ...	·68	35	8 to 9	Heavy sea.	Strong gale.

The preceding observations show that on the 11th, when the state of the sea and the strength of the wind indicated the existence of a cyclonic storm, her barometer had not fallen a tenth of an inch. It was only on the 12th, when she was in the midst of the storm, and the wind had increased to force 9, and was blowing a hard gale, that the barometer began to fall to any considerable extent.

These examples appear to establish that the barometric movements are very small in the outer portion of the smaller cyclonic disturbances of the Bay, and are generally smaller than those due to the regular changes common to the whole of India. Hence the barometer gives little or no practical warning of the approach of a small cyclone in the Bay, and mariners should therefore rely mainly on other indications.

The path of the cyclone was contrary to all recorded experience of storms in the Martaban Gulf. The following is the list of storms that have been known to occur in that portion of the Bay, taken from Mr. Blanford's Catalogue of the recorded Cyclones in the Bay of Bengal, up to the end of 1876, in Journ. As. Soc., Bengal, 1876, Vol. XLVI, Pt. II:—

1840—November 21st. To the N. E. of the Andamans.
1844—November 9th—14th. East of the Andamans. Encountered by

the Briton and Runnymede troop ships. Both vessels were dismasted and thrown on the Andamans.

1850—November 17th—19th. In the Andaman Sea. Passed east of Port Blair and travelled N. N. W.

1854—April 21st—23rd. A violent hurricane in the Gulf of Martaban and Rangoon.

1858—April 9th—10th. A storm from the Andamans to Cape Negrais. Much destruction of property occurred at Henzada and Rangoon, between which the centre passed.

There is no direct evidence in this list that any of these storms passed from the Martaban Gulf into the Bay of Bengal. It is, however, probable that the third storm in the list did so. It appears to be parallel in time of occurrence, and line of advance, with the storm under discussion. There is no apparent theoretical reason in support of the opinion that a storm generated in the Gulf of Martaban should not pass into the Bay. Experience certainly appears to indicate that such a line of motion is very rare. The great majority of the cyclonic storms in the Gulf of Martaban are generated to the east of the Andamans and north-east of the Nicobars, and advance in a general northerly direction across the south coast of Burmah, when they rapidly break up.

Hence, although experience is doubtless valuable in indicating the probabilities of the occurrence of cyclones, and their line of motion, it should be most carefully borne in mind, that they are mere probabilities based, at the present time, on very limited experience, and that it would almost certainly be misleading and dangerous to dogmatize our limited experience into rules or laws, which might fail on their first application.

Another feature deserving notice was the short period of its existence. Favourable conditions, according to the condensation theory, were present for some days previous to the 10th. The log of the Kwang Tung for the 7th proves that there was no cyclonic vortex in existence in the Andaman Sea on that day. The various observations of the 8th and 9th indicate that cyclonic motion on a considerable scale had not commenced on either of these days. The observations of the 10th, on the other hand, establish the existence of a small depression on that day which rapidly developed into a large atmospheric whirl. Hence the existence of the cyclonic vortex dates from the evening of the 9th, or morning of the 10th. The circulation intensified and developed rapidly on the evening of the 10th and morning of the 11th, so that there was a large barometric depression and cyclonic circulation on that day, to the north-east of the Andamans. The cyclone was then moving north-westwards.

It continued to accumulate energy until the morning of the 12th, when the action of the land on the atmospheric motion in the eastern and north-eastern portions of the cyclone retarded the advance of the vortex, and began to influence the cyclonic motion considerably. This proceeded at first slowly, but, as the storm moved northwards, the destructive effect of the Burmese and Arakan hills increased, so that the rotatory motion was gradually and completely broken up and disintegrated before the afternoon of the 14th, in the neighbourhood of Akyab. There was thus a period of about 48 hours, from the morning of the 10th to that of the 12th, during which the storm accumulated energy. During the next 24 hours, the rotatory motion continued almost undiminished, whilst the motion of translation was largely decreased. During the remaining 36 hours of its existence, the vorticose or rotatory motion was gradually diminished.

The force of the winds at and near the centre (which might perhaps be used to measure the intensity of the storm) depends mainly upon the strength of the atmospheric disturbance producing the cyclonic motion, that is, upon the rate at which aqueous vapour is condensed into rain and upon the character and distribution of the rainfall (*i. e.*, whether it is localized and concentrated over a comparatively small area or diffused). On the other hand, the extent of area over which the cyclonic disturbance extends appears to depend mainly, if not entirely, upon the length of time that has elapsed from its formation, and during which it has advanced over the sea area uninfluenced by the land. Hence it is that the most extensive cyclones have been generated in the centre of the Bay, near the Andamans, and have advanced northwards to the Bengal coast. This is not due to any meteorological peculiarity of the Bay in the neighbourhood of the Andamans, but to the fact that a cyclone generated there, and advancing northwards, takes a longer time to reach the land than if it were formed in any other part of the Bay, and has therefore a longer period during which its energy can increase.

CHAPTER V.

Concluding Remarks on the Condensation Theory.

In the preceding pages, all the observations throwing light on the two largest and most severe storms in the Bay of Bengal during the year 1883 have been given, together with a discussion of their more important features. It remains to explain the chief features of the two storms as physical phenomena, and hence also to suggest the theory of cyclonic generation and motion which appears to be applicable to them, and is consistent with our knowledge of the physics of the atmosphere.

In both examples, the greater portion of the mass of air that was thrown into a state of violent motion during the storm was for some days antecedent to the disturbances almost at rest, and in a state of approximate equilibrium. There was a break in the rains immediately preceding the formation of the first storm, which is well-known to be a period of light and unsteady winds in Bengal, and over the Head of the Bay. The second storm occurred very shortly after the first break in the north-east monsoon rains on the Coromandel coast, and when, as the various observations prove, winds were very light and variable over the greater portion of the Bay. Hence the first and most striking feature of these cyclones was, that a vast amount of kinetic energy, or motion, was rapidly given to a large mass of air which, previously to that action, was in an almost quiescent state. The gradual increase of the motion was in those two examples proved from observations taken by vessels passing through the areas of disturbance. The transformation from the state of approximate quiescence to that of violent cyclonic motion in the Bay is consequently a continuous process, the successive stages of which can be fully traced. And the entire development of these, and of all storms in the Bay of Bengal, appears to be due to actions occurring over the Bay itself, and not to atmospheric conditions at a considerable distance from the area of cyclonic disturbance.

The question of cyclone generation is therefore essentially one of transfer of energy. Viewed in this light there are two subjects for enquiry :—

1st. The source and character of the energy which is transferred to the atmosphere, and transformed into the kinetic energy of a mass of air.

2nd. The conditions necessary for the transfer of energy under consideration.

If these two questions are fully answered, a satisfactory explanation will be given of cyclonic generation as a meteorological problem. The complete mathematical treatment of this subject as a dynamical question is beyond the scope of the present article.

The energy which is transformed during the generation and existence of a cyclone, and which maintains the cyclonic circulation against the various resistances opposing it, and therefore tending to disintegrate it, is undoubtedly the latent heat energy given out during the condensation of aqueous vapour contained in the atmosphere. In all cyclones of the Bay of Bengal that have hitherto been investigated, heavy and, in the majority of cases, torrential rain is the most prominent feature. It increases in amount during the generation of the cyclone, is excessive during the existence of the cyclone in its complete

form, and rapidly decreases during the disintegration of the cyclone, ceasing with the disappearance of the cyclonic vortex. It is thus a phenomenon parallel in character and duration with the cyclonic motion or disturbance.

It is also equally certain that when aqueous vapour is condensed into rain, practically the whole of the solar thermal energy utilized to perform the work of evaporation is given out by the mass of vapour during condensation, and is transferred to the adjacent mass of air. Major Cunningham's Hydraulic Experiments at Roorkee appear to establish that the sun's heat under the most favourable conditions, that is, dry weather and high air temperature, does not evaporate more than one-tenth of an inch *per diem* from the surface of slowly moving water. The inverse process of condensation, in consequence of certain features of air motion dependent on rainfall, usually proceeds much more rapidly, and frequently restores the aqueous vapour in the form of rain to the earth's surface at the rate of one to two inches per hour. Prolonged rainfall at the rate of 10 to 30 inches *per diem* for periods varying from 24 to 72 hours are by no means uncommon during the passage of the larger cyclones of the Bay of Bengal across the Bengal or Madras coasts. It is probable, judging from the expressions used by sailors to describe the rainfall during cyclones in the Bay, that it is more intense and prolonged than on land.

If we therefore compare the rates at which evaporation and condensation can occur, it is certain that the energy released during the act of condensation is transferred to the atmosphere with very great rapidity during heavy rainfall and probably at a rate occasionally amounting to 100, 200, or even 400 times that at which it was absorbed during the process of evaporation. The effect of a continuous fall of 20 or 30 inches of rain over any portion of the earth's surface would, on the assumption of Major Cunningham's results, be equivalent to that of a sun 250 times as powerful as our present luminary acting directly on the mass of the atmosphere above the area of rainfall, instead of indirectly by means of convection currents due to the heating of the earth's land surface. The action is also usually continuous, and is not interrupted, as in the case of the direct solar action, by the succession of night and day. There is therefore the strongest probability that so powerful a disturbing action can produce very large and rapidly accumulating effects on the mass of the earth's atmosphere affected and influenced by it in a comparatively short space of time.

There hence appears to be no doubt that the energy transferred to the atmosphere during heavy rainfall is very large, and that the source of the energy thus indicated is adequate from every point of view to account for the production of the largest and most intense cyclonic cir-

culations. Other causes of the origin of cyclones have been assigned, as, for instance, differences of pressure, friction between parallel winds blowing from opposite directions, &c., but the slightest consideration seems to show that none of these is sufficient to account for the enormous and continuous transfer of energy that occurs during the prolonged existence of a large cyclone. The strongest argument against these theories, in the case of cyclones of the Bay of Bengal, is, that experience has established that the larger the cyclone, the smaller are the antecedent differences of pressure, and the feebler are the winds blowing from opposite directions, immediately before the formation of the cyclonic vortex.

The following statements based on the preceding remarks hence give the answer to the first part of the required explanation. When water is converted into aqueous vapour on the large scale at the earth's surface, thermal energy, derived from the sun, performs the work of evaporation, and is hence transformed. The aqueous vapour thus produced possesses an equivalent amount of energy, the greater part, if not the whole, of which it retains, so long as it continues in the vaporous condition. When it is reconverted into water, or condensed as rain, this portion of its total energy is given out, and transferred to the air. The *modus operandi* of this transfer is a matter of no importance in the present enquiry. Also, in all cases when the rainfall is heavy, and prolonged for a considerable time, the energy is given out at a much more rapid rate than that at which it was absorbed during the process of evaporation. Hence heavy and prolonged rainfall may give rise to a powerful, persistent, and continuously accumulating disturbance on the adjacent atmosphere, and, therefore, produce violent and extensive air motion. In virtue of the constitution of the atmosphere, the motion will be rotatory. Prolonged heavy local rainfall is hence an adequate and sufficient cause. It is, moreover, the only known cause which is equal or similar in amount to the effect, and hence there are strong reasons for assuming that it is the motive power which produces the peculiar motion of the atmosphere called cyclonic circulation on the large scale. It is, in fact, the most powerful disturbing action to which the air is subject, and the consequent motion of the air is, when the rainfall and consequent disturbance are excessive, the most violent in its character with which we are acquainted.

The history of the two cyclones has shewn most fully that heavy rainfall over the area of cyclonic motion or disturbance was a characteristic feature, and that in this respect they confirm previous experience. Hence the source of the energy of these two cyclones was almost certainly that which we have indicated in the previous statement, that is, the latent heat energy of the aqueous vapour derived previously from the sun, and transferred to the atmosphere during the process of condensation.

As rainfall does not always appear to produce cyclonic motion, it is clear that, although rainfall may be the source of energy, it is only when the rainfall occurs under special conditions that the accompanying air motion increases and accumulates in the peculiar manner necessary to give rise to a large and intense cyclonic circulation. Experience has shown that the following conditions, which can be proved to have a direct bearing on the formation of cyclones, are always present before and during the generation of cyclones in the Bay of Bengal :—

1st. The establishment and prevalence of a humid current over the extreme south of the Bay, which brings up large quantities of aqueous vapour into the centre or north of the Bay.

2nd. The occurrence of approximate uniformity of meteorological conditions, more especially of pressure, over the coasts of the Bay, and frequently over a considerable portion of the Bay.

3rd. The prevalence of light and variable winds over Bengal and the coasts of the Bay, and over a considerable portion of the Bay extending from the Bengal coast southwards. This condition is practically identical with the previous, as both are due to, and accompany, the same general atmospheric conditions.

4th. The absence of rainfall, and the prevalence of clear skies with fine weather, over the north and centre of the Bay, and in Bengal.

The relative importance of these conditions will be evident on very brief consideration. The first is evidently necessary to supply the aqueous vapour in sufficiently large amounts to give rise to continuous heavy rainfall over such a large area as is covered by a considerable cyclonic disturbance. The Bay of Bengal is not a large enough evaporating area to afford such a supply. Hence cyclonic storms are only formed in the Bay of Bengal when there is a humid current blowing into it from the Indian Ocean. This occurs only during the south-west monsoon period, when the south-west winds blowing at the entrance of the Bay are the northward continuation beyond the Equator of the south-east Trade Winds of the Southern Tropics. That such is the case is sufficiently proved by the fact that cyclonic storms on the large scale are entirely restricted to that portion of the year when south-west monsoon winds are blowing over a part or the whole of the Bay, that is, from the beginning of May to the end of December. It is also shown by the fact that, at the commencement and termination of the south-west monsoon period, any cyclones that are generated, form in the south of the Bay, whilst in the months of July and August, or during the height of the south-west monsoon, they form near the Head of the Bay. In short, the area of cyclonic generation in the Bay of Bengal depends mainly upon the season, and travels northwards or southwards, according as the south-west monsoon is advancing or retreating over the Bay.

The remaining conditions appear to be necessary in order that the rainfall may occur in such a manner as to give rise to and produce an atmospheric whirl. It is evident that if rainfall tends to set up rotatory motion in the air, it is absolutely necessary for rotatory motion on the large scale that there should not be several separate centres of rainfall and disturbance, each producing its own rotatory or cyclonic action, and therefore interfering with the others. It is essential that the rainfall should be localized and concentrated, that it should continue for some time over a comparatively small area, and be confined to that area. The more perfectly this is realized, and the longer this continues, the greater will be the accumulated disturbance. In order that the rainfall may occur over the same area for such a considerable period as to permit of the continuous accumulation of action, it is evident that ascensional motion should mainly occur there, and hence that, previously, there should be little horizontal motion of the air, and therefore very slight differences of pressure at the sea level. The necessity for the further conditions is hence also evident.

It will be seen that these conditions were fulfilled in the case of both storms, more completely (as might have been anticipated) in the case of the second storm, when the south-west monsoon current was weaker than it was at the time of the first storm. The history and discussion thus fully bear out the existence of the conditions immediately antecedent to the two storms which the condensation theory asserts to be necessary for the initiation and generation of a cyclonic storm in the Bay.

The preceding remarks hence indicate that the energy given out during the process of aqueous vapour condensation on the large scale is the motive power of cyclones, and that the rainfall must be localized and concentrated over a considerable area, for a period of one or more days, in order to produce the continuous and rapid accumulation of energy which characterizes a large cyclonic disturbance. Experience has also shown that the conditions which the condensation theory suggests as being essential for the occurrence of continuous and prolonged local rainfall over a portion of the Bay are exactly those which are present before and during all cyclonic storms in the Bay of Bengal, and that they are more fully marked before the occurrence of the larger than of the smaller cyclones of the Bay. It is, moreover, these antecedent conditions which form the only test or indication of the possible or probable early formation of cyclones in the Bay, and which are utilized in the preparation of the daily weather Reports issued by the India and Bengal Meteorological Departments.

EXPLANATION OF PLATES II—X.

The plates give the weather charts for each day during the whole period covered by the two storms of 1883 described in the preceding pages. The curved lines or isobars indicate the distribution of pressure. Along any one of these lines, the estimated air pressure at the sea-level (as determined from the reading of the barometer) is the same. Hence no change of pressure occurs along these lines, and the change of pressure is greatest perpendicularly across these lines. The rate of change is most rapid where the lines are nearest together. As the difference of air pressure between consecutive lines is the same, the rate of increase or decrease of pressure is inversely proportional to the distance between consecutive lines. The isobars form closed curves about the centre of a cyclonic disturbance. Hence the position of the cyclonic vortex on any day is at once determined by an inspection of the charts. The probable path is determined by joining these positions by lines. The direction of the air motion near the earth's surface is determined by the winds, which are shown by arrows flying with the wind, or pointing to the direction towards which the moving air is advancing. Small circles (o) indicate a calm at the hour of observation.

The charts give the distribution of pressure and wind directions at 10 A. M. of each day. They are based on the 10 A. M. observations taken at the land meteorological stations, and on the 8 A. M. or noon observations taken on board the ships which have furnished logs of the weather experienced by them in the Bay during either storm, allowance being made, wherever at is possible, for the difference of time between the two sets of observations.

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IV.—*Some Rough Notes for the Construction of a Chapter in the History of the Earth.*—*By* R. D. Oldham, A. R. S. M., *Assistant-Superintendent, Geological Survey of India.*

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To the coal-miner, or to the mere geological surveyor, the exact correlation of the rocks in different parts of the world is of little importance. Little does the mine-owner reck of whether his coal does or does not belong to the carboniferous era so long as it is saleable at a profit, nor need the geologist, asked to survey and report on a coalfield, trouble his head about this; but, to one who would unravel the physics or the history of the earth, the solution of this problem may well be of paramount importance, though unfortunately often impossible of attainment; generally, one might almost say always, he has to depend on fossils, but the answers these give are often contradictory or Delphic in their obscurity; at no time should they be too literally interpreted, but, like the cutcherry gong in an Indian station, must be made the most of as the only available substitute for a more accurate timepiece. But just as in this city where there are many thousand timepieces of various descriptions, of which probably no two keep identical time, every day the time-ball falls and the signal gun is fired to let all who may be concerned know that it is one o'clock; so in the past time-signals have been given throughout the earth, by which we can determine the contemporaneity of the strata in which their records have been preserved. Of this nature would be a wide spread glacial epoch comparable to that which in the

recent past has affected both hemispheres of the globe, but, as there is reason to believe that such have occurred at various periods in the history of the earth, we are dependent on the otherwise less accurate palæontological evidence for determining whether the strata shewing signs of glacial action can have been deposited at the same period or must belong to widely separated geological epochs.

There can be no doubt that of all forms of palæontological evidence the most trustworthy is that afforded by the marine mollusca. Inhabiting as they do an element of more uniform temperature, and of which every part is in continuous if circuitous connection with the rest, it is but natural that they should be more uniform in character than the fauna of the land, while the simplicity of their structure, greater than that found among vertebrates or higher invertebrates, renders them less liable to change through alteration of the conditions under which they live. On the other hand, this very stability of organism renders them useless for the exact correlation of strata far separated from each other; for mere determination of homotaxy, even did this exist in the sense in which the term was originally intended to bear, would be but of little value to the physical geologist, to whom the terms 'Jurassic' or 'Carboniferous,' if determined merely on palæontological grounds, are as meaningless, for determination of dates in the history of the earth, as the analogous terms 'Stone Age' and 'Bronze Age' are for determining periods in the history of the human race.

But, if the evidence afforded by marine mollusca is not sufficiently accurate and trustworthy, how much more is this true of that afforded by the terrestrial fauna and flora. True, the duration of the existence of a species of cycad, conifer, and, possibly, even a fern may be shorter on the average than that of a species of mollusc, and to this extent it may be a more accurate index of contemporaneity; but it is comparatively seldom that identical species are found in far separated deposits, and palæontologists have consequently to depend mainly on what are called 'allied species.' Now the hard parts of animals, which in almost every case are all that are preserved to us, give, for the most part, a very true and real indication of the affinity of the animal to which they belonged, while, from the leaf of a tree or the frond—generally barren or with the fructification obliterated in fossilization—of a fern, little or nothing can be gleaned of the relationship of the plant to which it originally belonged; thus no one would doubt that two specimens of *Terebratula* or Ammonite, declared by a competent palæontologist to belong to the same species, would, if we could recover their soft parts, still prove to belong to the same or very closely allied species, while, on the other hand, we have lately been informed, by a palæobotanist whose competence none

can doubt, that the Indian and Australian forms of the celebrated *Glossopteris browniana*, long believed to belong to the same species, differ so widely in their fructification that it is doubtful whether they can be included in the same family, and that they must certainly belong to different genera.*

As an instance of uncertainty of palæontological evidence, I need only quote the well-known case of the Umia and Katrol beds of Kutch, where beds containing a flora with a well-marked Lower Oolite facies overlie other beds in which the fauna is equally distinctly Upper Oolite in type; another case that might be quoted is that of the Rajmahal and Damuda floras; in the Rajmahal flora, there are, out of 47 species† in all, 26 which are identical with or allied to‡ European species: of these, *fifteen* are represented in the Rhætic beds of Europe, one species being hardly distinguishable from the European form: seven are represented by Palæozoic species, two belonging to an exclusively Palæozoic genus *(Eremopteris)*, while another *(Macrotæniopteris lata)* is, on Dr. Feistmantel's own admission, so like the Permian *Tæniopteris abnormis* as to be almost undistinguishable: two species only are allied to Liassic forms, and of these one is also represented in the Rhætic: five species are represented in the Lower Oolite of Europe, two by identical forms, while, of the other three, one is also related to a Carboniferous, and the other two to Rhætic, species. From this, an impartial observer would be inclined to place the flora as certainly not later than Rhætic, but, as on this point the talented palæontologist of the Geological Survey has expressed a very positive opinion that the flora is Liassic in facies, I must perforce

* Palæontologia Indica, Fossil Flora of the Lower Gondwanas, Vol. III, p. 103 In this connection, I may quote Dr. Feistmantel as follows:—after noting the difference in the fructification of the two forms, he adds 'so that I would be quite justified in placing these in a separate genus altogether and thus disposing of the difficulty in determining the age of our Damuda series owing to the correlation of the Indian Australian species." An easy way of 'disposing of the difficulty' forsooth, but my colleague can hardly have perceived the full force of these words when he penned them, for, carried to their legitimate conclusion, they cut away the ground on which alone palæobotanists can base their claim for the acceptance of fossil plants as a means of correlating distant deposits. The lesson to be learnt is rather that the conclusions of even the ablest palæobotanists must, owing to the nature of the material they have to work with, be received with caution, and that generic and specific names of fossil plants do not necessarily represent any real affinity, and that in some cases the latter and in most cases the former are names merely and nothing more.

† Here and elsewhere, except where the reverse is distinctly stated, I owe my palæontological facts to Dr. O. Feistmantel's writings in the publications of the Geological Survey of India.

‡ I use this term in the same sense as it is used by palæobotanists; it may well be that some of these 'allied species' have no real connection with each other.

bow to his opinion, a feat I can the more easily perform that the exact determination of the age of the Rajmahal series is irrelevant to my present purpose, this being merely to point out that the flora, judged by European standards, is of an extremely heterogeneous character.

Turning now to the Damudas, we find that, out of a total 63 species, only twenty shew any affinity to European forms: of these, six are represented by Rhætic species, two of which are identical in Europe and in India: eight are represented in Jurassic beds, one being identical with a species from the Yorkshire Oolite, and two have their nearest allies among living forms: while, of those which are related to species older than the Rhætic, two are represented in the Permian, and two only are represented by allied species in the Trias. The flora of the Damudas is thus seen to be as heterogeneous in its character as that of the Rajmahals and, like that of the latter, would naturally be attributed to a Rhætic age, yet the two series are not merely separated by a break in the stratification, but the two floras are so contrasted in their characters that, whereas the Damuda flora is almost exclusively composed of ferns, that of the Rajmahals is markedly the preponderance of cycads, and, of all the Rajmahal species, three only are represented in the Damudas and those by "allied species." These beds have been classed by Dr. Feistmantel as Triassic, and the probabilities in favour of their being contemporaneous in the Trias of Europe are about the same as those in favour of a Liassic age for the Rajmahals or a Rhætic age for either of the two, but this is all that can safely be said.

Turning now to the Kach flora, which, whether we judge from the associated marine fauna or from the flora itself, is of Oolitic age, we find, out of a total of 27 (excluding Algæ) species, 18 are represented by identical or allied species in Europe, *four* are identical with European Oolitic species, of which, however, one ranges down to the Rhætic, nine more forms are related to European Oolitic species, while four only are related to species older than the Oolite and in two cases at least the relationship is not very close; we have here, then, a much closer relation with a definite European flora than is the case with the Damuda and Rajmahal beds, and this, as I shall presently shew, is of considerable importance in unravelling the history of the Gondwana age.

In Australia, there is a series of plant-bearing beds whose flora shews many affinities with that of the Indian Gondwanas, but which range over a more extensive period of time, and are marked, both at their upper and at their lower limits, by the association of the plants with marine fossils.*

* *Conf.* principally Rev. W. B. Clarke, Remarks on the Sedimentary formations of New South Wales, 4th edition, and Dr. O. Feistmantel in *Palæontographica*, 1878 (Appendix).

At the base of the series, are beds whose marine fauna indicates a Devonian age; above these, come beds which contain a flora consisting principally of such genera as *Lepidodendron*, *Rhacopteris*, and *Calamites*, among which occurs a single species of *Glossopteris*.* Above these, but still below beds in which a marine fauna of Carboniferous type is found, there is a flora which, judged by European standards, is Mezozoic in facies. At the top of the Newcastle series, to which the beds just mentioned belong, a more abundant flora is found, which presents many relationships to that of our Indian Damudas: in both, *Glossopteris* is a dominant type, both contain the *Glossopteris browniana* and two other species allied to Damuda forms: *Sphenopteris*, which in the Newcastle beds is represented by six species, is only represented in the Damudas by one (*S. polymorpha*, Fstm.), which, however, is said to be more closely allied to the Australian *S. alata* than to any European form: the only species of *Phyllotheca* is allied to the Damuda *P. indica*, and the common occurrence of *Vertebraria* in both is another link. That this relationship is not so close as was at one time believed, I readily admit, but nevertheless the relationship is real, and, though it may be presumptuous to express an opinion at variance with that of the talented palæontologist of the Geological Survey of India, I must say that to me the relationship seems far closer than that which unites the Damudas to the Trias of Europe.

Above the Newcastle beds, come the Hawskbury beds, which have yielded but two species of ferns, one of which (*Sphenopteris alata*, Bgt.), however, is allied to a Damuda species. Above the Hawksbury, come the Wianamatta beds, which have yielded six species of plants, no less than three of which are allied to Damuda forms.

It is thus evidently impossible to correlate, on palæontological grounds alone, these beds directly with any of our Indian horizons, but, like the Indian Talchirs, the Hawksbury beds contain certain beds of fine clay through which boulders of all sizes are scattered promiscuously in a manner that can only be attributed to the agency of floating ice. In Victoria, there are beds which similarly indicate the existence of a severe climate at the time of their deposition, and these—the Bacchus Marsh beds—have yielded three species of *Gangamopteris*, of which one is identical with, and the other two are closely allied to, Talchir species. The Bacchus Marsh beds have not yielded a single species common to themselves and to the Hawksbury beds, but this is of little importance, as it is impossible to suppose that the entire flora of the Bacchus Marsh period consisted

* There is some doubt attaching to the correctness of this statement. The *Glossopteris* was obtained from a different locality and possibly from a newer series of beds than the others.

of three species of *Gangamopteris*, or that of the Hawksbury period to have been limited to two species of ferns. But, if not directly referable to the same epoch by their contained fossils, there can be no doubt that they are on the same horizon, for, in the uppermost beds of the Newcastle series, two species of *Gangamopteris* are found, one identical with, and the other allied to, species from the Bacchus Marsh sandstones of Victoria, while the beds above the Hawksbury series in New South Wales can be correlated with those which overlie the Bacchus Marsh beds in Victoria by the occurrence of *Pecopteris australis*, Morr. and *Tænopteris daintreei*, McCoy in both. The presence of beds indicating glacial action in both and the absence of similar beds in the associated strata further prove their absolute contemporaneity; and by an extension of the same reasoning we may assign the Talchirs of India to the same glacial epoch.

The palæontological relations of the Gondwanas with the Karoo and Uitenhage series of South Africa are much simpler than with the Australian formations. From the upper part of the Karoo beds, which unconformably overlie strata containing an Upper Palæozoic fauna, a limited flora of but five species has been obtained. Of these five, one is *Glossopteris browniana*, another, *Dictyopteris? simplex*, Tate, is, according to Dr. Feistmantel, allied to *Glossopteris damudica*, Fstm., and *Rubidgea mackayi* is, on the same authority, probably a *Gangamopteris;* in addition to these, Tate gives a species of *Phyllotheca*, but the identification is doubted by Dr. Feistmantel.* Associated with these, there is an abundant and peculiar Reptilian fauna with *Dicynodon* as a dominant type, a genus not known elsewhere, except from the Panchet subdivision of the Damuda in India. In the overlying Uitenhage series, there is a flora consisting of eleven determinable species; of these one species of ferns is also found in the Rajmahals, while two, and possibly three, species of ferns and one conifer are closely allied to Rajmahal forms.† These Uitenhage plants are associated with beds containing an Oolitic marine fauna. The palæontology of these beds sufficiently indicates a parallelism with the Gondwanas, and, in confirmation of this, we find, at the base of the Karoo series, an undisputably glacial boulder bed,‡ which we shall be justified in assigning to the same epoch as those of the Talchirs in India and of the Hawksbury and Bacchus Marsh beds in Australia.

Viewing these circumstances, there can, I think, be no doubt that these glacial boulder clays of Africa, India, and Australia represent one and the same epoch in the history of the earth and are, as strictly as the word can be applied, of contemporaneous, if not absolutely coeval, origin.

* Q. J. G. S., XXIII, 140, *Palæontographica*, 1878, p. 114.
† Q. J. G. S., XXIII, p. 140.
‡ Q. J. G. S., XXVII, 58 and 535.

And further, as in every case the palæontological evidence indicates that these glacial beds are of late Palæozoic or early Secondary age, I think it is probable that, as has been suggested by Mr. H. F. Blanford, they are of the same age as the Permian boulder clays of Europe.*

Having thus obtained a common era in the geological history of these three countries (India, Africa, and Australia), we are able to examine their history in an intelligent manner. The first thing noticeable is that, in Australia, at a period corresponding fairly to the Devonian, both the fauna and the flora were, judged by European standards, of a Palæozoic type. Later on, probably in Lower Carboniferous times, there appears, among species of *Lepidodendron*, *Rhacopteris*, and *Calamites*, which, in Europe, are found in rocks of Carboniferous age, a single species of *Glossopteris*, the forerunner of a newer flora destined to supplant the older forms. In the Newcastle (Upper Carboniferous) beds, this flora has completely ousted the older forms, and, as I have already noticed, shews considerable relationship to that of the Damudas in India. Yet, if the Talchirs and the Bacchus Marsh beds are really of contemporaneous origin as was first suggested by Dr. Feistmantel, and if the Bacchus Marsh and Hawskbury beds are also contemporaneous (and the presence of traces of glacial action in all three is at least presumptive evidence in favour of this conclusion), the Damudas must be of very much later date than the Newcastle beds, and we have to explain why it is that the Newcastle flora left Australia when it did, and why it or its descendants lingered on in India, and, as I propose to shew, spread over what is now the Old World producing important modifications in its flora.

It is possible to suppose that the Newcastle flora required a warm —though from internal evidence one would rather look upon it as indicating a cool temperate—climate; that, on the advent of more severe conditions, it migrated towards the Equator and remained there, not merely through a period of extreme severity, but through a further period, when the climate was cooler than it had been during the deposition of the Newcastle beds, and during which a flora more suited to the latitude flourished in Australia. But there are so many objections to this hypothesis that it can hardly be tenable, and, however wild my alternative hypothesis may be thought, I hope to prove that it is really the more probable of the two.

In the first place, we have to account for the prevalence of glacial conditions at a low level in India even within the tropics. This was not paralleled during the last glacial period, for even the erratics of the Petwar are 10 degrees beyond the tropics and 2,000 feet above the level

* This correlation of the Indian, African, and European boulder beds has been suggested by Mr. H. F. Blanford, Q. J. G. S., XXI, p. 519.

of the sea, while the Petwar was certainly not less elevated during the glacial period than it is now. Further, the glacial deposits in India are far better developed, and, to judge from the descriptions, must be far thicker and represent a much longer period of time during which the climate was severe than those in Australia. Yet the glacial deposits of New South Wales are 10° further from the Equator than the Indian, so that, if we might shift the Equator some 10° further south between India and Australia, observed facts would be more in accordance with what one would expect than can be the case if we are compelled to assume the Equator fixed throughout all time.

But, if we try to compare the facts observed in Australia and Africa, we are landed in a still greater difficulty, for, lying as they do on about the same parallel of South Latitude, the glacial beds are more strongly developed in Africa even than in India; and, as we can hardly suppose the greater severity of climate to be due to altitude, it must have been due to latitude, to obtain which we must suppose that that portion of the Earth's crust which now forms South Africa then lay in a higher latitude than that which is now Australia; in other words, the comparison of the Permian (?) glacial beds of Africa and Australia, as in the case of Australia and India, points to the conclusion, either that there has been a change in the position of the axis of revolution of the earth, or, what is more probable, that the crust of the earth then occupied a position relative to the central nucleus different from that which it now does. An experiment with a globe will shew that the relations of India, Australia, and Africa indicated above, *viz.*, that Central India was in a higher latitude than New South Wales and South Africa in a higher latitude than either, are best satisfied by taking the Equator between India and Australia, but nearer the latter than is now the case, and thence through a point lying between the Cape of Good Hope and the South Pole in not less than 70° of South Latitude; a disposition which would bring some point in Central Africa over one of the poles.

Turning now from these physical and climatic arguments to those derivable from palæontology, I hope to shew that they lead to the same conclusions.

I have already referred to the fact that the Damuda and Rajmahal floras of India shew affinities with those of almost every division of the Mezozoic era in Europe, and I would now draw attention to the fact that those species which are related to upper Secondary forms in Europe belong very largely to types which first appear in the Palæozoic beds of Australia. Foremost among these, of course, are *Glossopteris*, *Phyllotheca*, and *Vertebraria*; not known in Europe before Jurassic times, these were certainly living in Australia at the commencement of the Carboniferous epoch. *Pecopteris*, *Thinnfeldia*, *Gangamopteris*, *Noggerathiopsis*

likewise are found in the Newcastle series of New South Wales, but in Europe only in Secondary beds. Allowing that some of these genera are purely artificial, and that the species grouped under them may not really be allied in every case, it is on the other hand probable that some forms placed under distinct genera should properly be united with some of those grouped under the genera above mentioned, and, making the most liberal deduction for the value or want of value of negative evidence, I think that there is still a very considerable weight of probability, on this count alone, in favour of a newer type of vegetation having originated in Australia in Palæozoic times and in the Permian period commenced to spread over the rest of the world.

The explanation seems to be that, on the advent of the Glacial period, the flora, which had supplanted the older types in Australia, was driven towards the Equator. As the climate ameliorated, it did not again retreat towards Australia, either because its place was taken by newer species, or, more probably, because, owing to changes in the distribution of land and water, it could no longer do so, but to the north—or what for convenience we may provisionally call the north,—of the Equator it lived on in what is now India and, gradually spreading over the hemisphere, produced a profound modification in the pre-existing floras of what we now know as the Old World.

The flora of the Wianamatta beds, as I have explained, shews a certain relationship with that of the Damudas, but none with that of the Newcastle beds as far as species go; of the genera, however, three out of the six, or, if we include the Hawksbury beds, four out of seven are also found in the Newcastle beds. The beds newer than the Wianamattas have yielded a flora consisting of nine species belonging to seven genera, of which, if we except the *Phyllotheca australis*, only one species is allied to an Indian form, *viz.*, *Pecopteris australis*, Morr. allied to *P. indica*, Oldh. and Morr. from the Rajmahals. We have here a distinct decline in the closeness of relationship between the Indian and Australian floras, and, though, of course, this might be due to the imperfection of the record, the probabilities are against its being entirely due to that cause, and we may safely conclude that some barrier separated the two areas, by which the floras of India and Australia were kept apart and followed separate and consequently diverging lines of descent.

Turning now for a while to South Africa, I must commence by declaring it as my opinion that the relationships between the Indian and African floras of the periods I am discussing are with difficulty explicable, unless it is granted that there was in those days a continent, or at any rate a continuous chain of islands, stretching from South Africa towards India. I am aware that Mr. A. R. Wallace has declared such to be uncalled for and

impossible to grant,* and I am ready to admit that the facts of distribution of animals as detailed by him are conclusive against the possibility of such a distribution of land and water, at any rate since the Miocene period. But there is no reason to suppose that the present distribution of plants or animals can throw any light on the distribution of land and water in late Palæozoic and early Secondary times. On the other hand, in favour of the land connection, I claim, *firstly*, that the relationship between the fauna and flora of the Damudas on the one hand and the Karoo beds on the other is far more real and close than the mere 'similarity of animal and vegetable productions' to which Mr. Wallace seems to have considered it to be confined; *secondly*, that this relationship of the two floras continued into the Uitenhage and Rajmahal series, which could hardly have been the case had the two areas been as separated then as now; and, *thirdly*, that the very peculiar relationships and differences between the cretaceous faunas of Central and Southern India on the one hand and Arabia and South Africa on the other are such as imperatively to demand the existence of a continuous barrier of dry land stretching between India and Africa. It is needless to expatiate further on this point, for, if such a barrier existed during the Cretaceous period, any argument against its possibility derived from the doctrine of the permanence of continents must fall to the ground, and there remains no reason why, if on independant grounds its existence is shewn to be probable, such a modification as I require may not have existed at the commencement of the Secondary period. That, during the deposition of the Damudas, there was continuous land communication with South Africa I do not suppose, for the very remarkable reptilian fauna, which, like the recent marsupial fauna of Australia, mimicked many of the higher mammalia, points rather to some isolated continental island which was connected with India, as Australia now is with Asia, by a chain of large islands separated by narrow straits, across which the spores of ferns and the seeds of plants could be wafted, but which were impassable to terrestrial reptiles.

But even a land connection of this sort would probably be inadequate by itself to account for the close relationship which the small fragment preserved to us of the flora of the Uitenhage period shews to that of the Rajmahals. For it is at least highly probable that the heat of the Equator would be as effectual a barrier as a broad sea, and, if the floras of India and Africa had pursued independent courses of development for a period sufficient for the dying out of every species and almost every genus, and for a change in the facies of the flora from one composed mainly of ferns to one composed mainly of cycads, it is inconceivable that the floras of the Uitenhage and Rajmahal series should exhibit the close

* Island Life, p. 398.

relationships they do. But this difficulty would not exist could we suppose that what are now South Africa and India then lay on the same side of the Equator; and thus the palæontology of these beds, as well as their petrology, points towards the conclusion that in early Secondary times the crust of the earth did not occupy the same position with respect to the axis of rotation as it now does.

That none of these arguments are conclusive by themselves I admit; I willingly admit that the floras preserved to us represent but a fraction of the species that lived when the beds that have yielded our fossils were being deposited, but the probability is vastly against only those species which were related to each other in the two countries being preserved, and we may, I think, safely argue from the small sample preserved to the larger bulk which is lost. In the same manner, I freely admit that the differences in the severity of climate may have been due to other causes besides difference of latitude, but on the average a colder climate indicates a higher latitude, and, when we find that, from whatever point we approach this matter, we are led towards the same conclusion, it seems to me that there is a very strong presumption in favour of its truth.

I fear this paper has already extended to too great a length for me to examine the arguments that have been put forward to prove that any change of latitude is physically impossible, but I cannot conclude without pointing out that what has been proved is that no conceivable elevation or depression of the earth's surface could produce an appreciable alteration in the axis of rotation of the earth as a whole. But, though the mathematical reasoning on which this conclusion is based may be unassailable, it has no bearing on the question of whether changes of latitude may not have taken place in the past, except on the assumption that the earth is rigid throughout, and that the crust has no power of sliding over the heated if solid core, an hypothesis which has been ably combated by the Rev. O. Fisher,* and which I hold to be inconsistent with the known facts of stratigraphical geology. While, if the views put forward in this paper are true,—and there seems to me a very strong presumption in their favour,—the crust of the earth must in Mezozoic times have occupied a very different position with reference to the axis of rotation from that which it does at the present day.

As yet the only fact which has in any material degree attracted the attention of English geologists is the prevalence during the past of mild climates within what are now the Arctic regions; and hypotheses have been broached to account for this independent of an alteration of the position

* Physics of the Earth's Crust *passim*; see particularly p. 184.

of the crust relative to the central core of the earth; but the more completely such an hypothesis may explain the absence of any trace of glaciation in the Palæozoic, Secondary, or Tertiray rocks of the Arctic regions, to which Baron Nordenskjöld has drawn our attention, the more irreconcileable is it with the repeated traces of glacial action that are met with almost within the tropics. Yet the latter as urgently requires explanation as the former, and I have put these suggestions forward not from any conviction of their intrinsic truth, but because I feel that the rigid bonds within which mathematicians have sought to confine geologists must be largely and materially relaxed, because I feel that every addition to the growing pressure against these bonds is of some—even if but small—importance, but chiefly because I trust that I may be instrumental in drawing the attention of others with greater opportunities and greater abilities to the solution of this problem.

P. S.—Just a week before this paper was read Mr. W. T. Blanford, addressing the geological section of the British Association at Montreal, devoted the greater part of his address to the consideration of a subject to which he has before now referred, more particularly in the Records of the Geological Survey of India, and on which I have cursorily touched in the introductory part of this paper; I mean the uncertainty of palæontological evidence in determining the exact correlation of widely separated beds. He also refers to a report on the Stormberg coal-fields by Mr. E. J. Dunne, which I have strangely overlooked: Mr. Dunne mentions the existence of three species of plants in the Stormberg beds identical with Australian species, an identification which, if correct, greatly diminishes, if it does not altogether annihilate, the value of my argument from the relationships between the African and Indian early Secondary floras, but this is of the less importance, as, owing to the known value or want of value of negative evidence in palæontology, little value would in any case attach to an argument of this kind.

V.—*A new Species of* Simulium *from Assam.*—*By* Dr. Edward Becher, *Vienna. Communicated and translated by the* Natural History Secretary.

[Received October 13th;—Read November 5th, 1884.]

(With Pl. XIV.)

Simulium indicum, nov. spec.

♀. *Caput et thorax brunneo-nigra; thorax convexus, scutellum nigrum; palpi 4-articulati, fusci; antennae 10-articulatae, fuscae; alae magnae, latae, nervi costales crassiores quam reliqui; pedes varii: femora et tibiae in basi flavae, in apice fuscae, tarsi fusci; abdomen breve, segmentum primum latissimum; hoc et trium sequentium pars ventralis flavicans, cætera subfusca. Longitudo* 3 *mm.*

Head free, standing pretty low; brown-black; forehead broad, clypeus short, nearly vertical; eyes kidney-shaped, with a moderate notch for the reception of the first antennal joint. Ocelli wanting. Antennæ dark brown-black, 10-jointed; the second joint distinctly constricted off from, and equal in length to, the first, and longer than the rest; the three succeeding joints broader than long, telescoped into one another; the four next equally long and broad, each tapering to the apex, the last joint pointed at the apex, somewhat longer than the preceding.

Proboscis salient, dark; mouth-parts differing in matters of detail only from those of the typical form; palpi dark, 4-jointed, the basal joints lighter; the first joint short, the palp-scale resembling it and thus apparently representing a fifth joint, the second and the third joints almost of the same length, the fourth 1½ times as long as the third, all the joints pretty equally broad and moderately bristly.

Thorax brown-black, high-arched, without transverse suture, tergum and scutellum velvet-black, somewhat shining, sides of the thorax lighter, especially near the coxæ of the first pair of legs.

Wings* large and broad, the marginal vein thick, terminating before the apex of the wing, the anterior branch of the first longitudinal vein

* In order to facilitate comparison with other descriptions, the usual nomenclature of the veins of the wings is retained in the following description. According to Adolf's theory, the veins should, in consideration of Brauer's work on this subject, be named as follows:—the anterior branch of the first longitudinal vein = the auxiliary vein *(Hilfsader)*; the principal branch of the first longitudinal vein = the first longitudinal vein; the small transverse vein = the trunk of the third longitudinal vein; the third and the fourth longitudinal veins = the third longitudinal vein; the succeeding fold = the fourth longitudinal vein; the fifth and the sixth longitudinal veins = the fifth longitudinal vein; the fold = the anal vein (*Conf.* Brauer, Denkschr. d. Kais. Akad. d. Wissen. Wien, Math. Nat. Cl. Bd. xliv, 1882, p. 90, and Wiener Ent. Zeitschr. ii, 1883, Heft 2, p. 27).

short, scarcely reaching the middle of the wing, the principal branch longer, running out near the third longitudinal vein; the second longitudinal vein wanting; the third branching off from the first before the middle, running into the marginal vein far before the apex of the wing; the three first veins thick and distinct; the succeeding ones very weak; the fourth longitudinal vein forked at the so-called small transverse vein, the prongs of the fork hence much longer than the handle, the upper prong slightly bisinuous, the lower almost straight; the fifth vein straight, a little bent outwards; the sixth strongly bisinuous; the axillary vein not reaching the hinder margin, slightly sinuous; between the fourth and the fifth veins a straight, very distinct fold; a similar though weaker fold behind the sixth vein. Halteres uncovered, dazzling white.

Legs: coxæ dark, trochanter long, yellowish; femora and tibiæ throughout black-brown, metatarsus lighter at the base, a little shorter than the tibia; all the tibiæ with spurs, metatarsus of the third pair of legs notched at the apex (figs. 5, 6), those of the two first pairs truncate, spurred; the fourth tarsal joint expanded into a heart-shaped figure; the fifth longish clavate, with long divergent curved bristles, which in the first pair of legs are seated on the *third* tarsal joint; legs thickly covered with hairs, particularly on the tarsus, ungues small, pulvilli rudimentary.

Abdomen short, of eight segments; the first segment is the broadest and, like the sternal parts of the three succeeding segments, yellowish; the genital parts a little projecting.

The above-described species of *Simulium* is the first that has yet been made known from Asia, as only a few non-European forms have hitherto been described, whereas the number of European species is not inconsiderable.

The larvæ and the pupæ (figs. 11, 12, 13) of the European species live in water; the latter in conical (*tütenartigen*) cocoons attached to stones, stalks of grass, confervæ, and the like.

Explanation of Plate XIV.

Fig. 1. *Simulium indicum*, ♀, × 8. Fig. 2. Wing × 8. 3*a*. A leg of the first pair × 15. Fig. 3*b*. Tarsus of the same leg × 60. Fig. 4*a*. A leg of the second pair × 15. Fig. 4*b*. Tarsus of the same × 60. Fig. 5*a*. A leg of the third pair × 15. Fig. 5*b*. Tarsus of the same × 60. Fig. 6. Head from in front × 30. Fig. 7. Antenna × 90. 8. Mandible × 90. Fig. 9. Hypopharynx × 90. Fig. 10. Maxilla and palp × 90. Fig. 11. Larva of *Simulium ornatum*, Mg. × 6. Fig. 12. Pupa of *Simulium* sp. in its conical cocoon.

VI.—*Variations of Rainfall in Northern India during the Sunspot Period.*—*By* A. N. Pearson, Esq., *Officiating Meteorological Reporter for Western India. Communicated by the* President.

[Received October 6th ;—Read November 5th, 1884.]

(With Pl. XI.)

Mr. S. A. Hill, in his paper on the "Variations of Rainfall in Northern India," published in the *Indian Meteorological Memoirs*, Vol. I, showed very clearly the opposition that exists between the variations of the winter and of the summer rainfall in Northern India during the sunspot period. For the purpose of bringing forward with greater clearness the main points of his investigation, he put the actual rainfall totals—which, as they stood, showed considerable apparent irregularities—through a simple process of smoothing such as is frequently adopted in dealing with statistical tables ; and, by so doing, eliminated the apparent irregularities. But it appears to me that the unsmoothed results present points of interest over and above those that are presented by the smoothed results ; that, in fact, the apparently irregular variations are regulated in a very definite manner.

In the table here given, I reproduce the general means of Mr. Hill's Tables II and IV, together with the smoothed results as he gave them in the text.

Variations of the Rainfall for each Year of the Eleven Year Cycle in Percentages of the Local Means.

Year of the Cycle.	Winter Rainfall.			Summer Rainfall.		
	Unsmoothed.	Smoothed.	Difference.	Unsmoothed.	Smoothed.	Difference.
1st	— 17·6	— 17·1	— 0·5	+ 0·8	+ 3·6	— 2·8
2nd	— 4·6	— 13·6	+ 9·0	+ 12·7	+ 7·4	+ 5·3
3rd	— 25·6	— 18·8	— 6·8	+ 3·3	+ 9·8	— 6·5
4th	— 19·5	— 20·4	+ 0·9	+ 19·8	+ 12·6	+ 7·2
5th	— 17·0	— 7·8	— 9·2	+ 7·4	+ 7·8	— 0·4
6th	+ 22·1	+ 23·1	— 1·0	— 3·5	— 5·6	+ 2·1
7th	+ 65·4	+ 35·6	+ 29·8	— 22·7	— 10·8	— 11·9
8th	— 10·4	+ 15·7	— 26·1	+ 5·6	— 8·1	+ 13·7
9th	+ 18·3	+ 10·2	+ 8·1	— 21·0	— 10·0	— 11·0
10th	+ 14·9	+ 4·9	+ 10·0	— 3·6	— 7·0	+ 3·4
11th	— 28·6	— 14·9	— 13·7	+ 0·2	— 0·6	+ 0·8

The smoothed numbers of the above table are curved in the accompanying diagram (Pl. XI) in thick continuous lines, under the names "Winter Rainfall, A" and "Summer Rainfall, B." The figures so produced are identical with the curves given by Mr. Hill in his paper. The unsmoothed numbers of the above table are in the diagram superposed in dotted lines upon the smoothed curves. At the bottom of the diagram, I have reproduced the sunspot curve as given by Mr. Hill.

On inspecting the smoothed rainfall curves, it will be seen that the winter and the summer curve both agree in showing a single oscillation during the eleven years of the sunspot period; but they differ in the character of that oscillation, for, while the winter rainfall is at its maximum during the year of sunspot minimum, the summer rainfall on the contrary is then at a minimum. This is the main fact pointed out in the paper above quoted.

On inspecting the actual figures, however,—the unsmoothed numbers in the above table and the dotted curves A and B of the diagram—it will be seen that, besides this eleven yearly oscillation, both the winter and the summer rainfall show several variations of minor period such as one might naturally suppose to be accidental; thus the winter rainfall shows three distinct maxima, one in the 2nd year of the sunspot cycle, one in the 7th year, and one in the 9th and 10th, and shows marked minima in the 3rd, 8th, and 11th years; while the summer rainfall has maxima in the 2nd, 4th, and 8th years and minima in the 3rd, 7th, and 9th.

It is to these minor period oscillations that I wish in this short paper to call attention. And, in order that they may present themselves in a more convenient form for study, I have separated them from the eleven yearly oscillation by the simple method of subtracting the smoothed numbers in the above table from the unsmoothed. The differences are curved in the diagram under the name "Minor Oscillations of A and B," the winter oscillations being given in dot-and-dash lines, and the summer in simple dotted lines.

Confining attention to these "minor oscillations" curves, it will be noticed that, in those years which at the foot of the diagram are marked +, and which are years of maximum sunspot, the short period oscillations in the winter and the summer rainfall are of the same character, that is to say, that when there is more winter rain there is more summer rain, and when there is less of the one there is less of the other also. But it will be seen that, in those years which at the foot of the diagram are marked —, and which are years of minimum sunspot, the short period oscillations in the winter rainfall are of opposite character to those in the summer rainfall, that when there is more rain in the winter there

is less during the summer, and *vice versâ*. Again, in those years which in the diagram are marked ±, and which immediately precede the years of sunspot maximum and minimum, the order above pointed out obtains only in a slight degree; in other words, these are years of transition.

That these facts are purely the result of accident seems very unlikely, for they are supported by three other series of concurrent facts; which are as follow:—

1st. The *plus* years begin immediately *after* the sunspot maxima, and the *minus* years begin immediately *at* the sunspot minimum.

2nd. There are more transition years during the slow descent of the sunspot curve than during its rapid ascent.

3rd. The oscillations of both the winter and the summer rainfall are of greater amplitude during the *negative* years than during the *positive*.

With reference to the first of the above series of facts, it might be supposed that, as the *minus* years begin immediately *at* the sunspot minimum, so for perfect analogy the *plus* years should begin immediately *at* the sunspot maximum. But this is by no means necessary, for the slight delay in the coming in of the positive years agrees very well with the slow descent of the sunspot curve as compared with its rapid ascent.

The main fact which I have pointed out in this paper,—namely, that the smaller variations of the winter rainfall are the same in character as those of the summer rainfall during years of maximum sunspot; and opposite in character during years of minimum sunspot,—if it can be established as a general rule, will be an important one; for it will indicate that, whatever be the cause which produces the general opposition in character between the eleven yearly variations of the winter and of the summer rainfalls, that cause operates chiefly during the years of minimum sunspot, and during three years of maximum sunspot it operates only in a very minor degree, and in two of those years (namely, the 1st and 2nd) it probably does not operate at all. By thus limiting the period during which the cause operates, a valuable point is gained, and a clue to a knowledge of the cause possibly afforded.

It is also interesting to notice that not only do the rules above indicated obtain *qualitatively*, but that there is also a near approach to a *quantitative* relation between the short period oscillations of the summer and the winter rainfall respectively. The nature of this relation in the years which I have denoted as *positive*, namely, in the 1st, 2nd, and 3rd years of the sunspot cycle, will be seen at once on inspecting the "minor oscillations" curve of the diagram. It will be observed that the oscillation which takes place in the two curves during those three years is not only the same in phase, but is nearly the same in amplitude. The

fact can be expressed numerically by taking the percentage rainfall as given in the "Difference" columns of the above table; when it will be seen that the winter rainfall of the 2nd year was 16·3 heavier than during the 1st and 3rd years taken together; while the summer rainfall was 14·6 heavier. The numbers 16·3 and 14·6, which according to this method are a measure of the excess of the winter and the summer rainfall respectively during the 2nd year, approach each other sufficiently to be noticeable.

The nature of the quantitative relation during the negative years, namely, the 7th, 8th, and 9th, will be best seen by an examination of the actual rainfall of those years. This, obtained from Mr. Hill's Tables I (A and B) and III (A and B), is as follows :—

Year of the Cycle.	Winter Rainfall.			Summer Rainfall.		
	Hills.	Plains.	Mean.	Hills.	Plains.	Mean.
	inches.	inches.	inches.	inches.	inches.	inches.
1st	17·95	6·30	12·12	41·81	26·36	34·08
2nd	9·58	3·23	6·40	54·01	34·63	44·32
3rd	16·55	4·59	10·57	47·13	27·03	37·08
Average of the three years.			9·70			38·49

Dealing only with the mean results, the variations in each year from the three years' average are in the case of the summer and the winter rainfalls respectively as follows :—

	7th year.	*8th year.*	*9th year.*
Winter	+ 2·42	— 3·30	+ 0·87
Summer	— 4·41	+ 5·83	— 1·41

Now the point to be noticed is that

2·42 : 4·41 :: 3·30 : 5·83 :: 0·87 : 1·41,

or very nearly so; the winter figures to be in exact proportion should be 2·53, 3·34, and 0·81; but the approach to exactness is sufficiently near to be striking, and to make one suspect that there has been something more than chance at work in its production. If this proportion can be established as a general rule, it will signify that, during the three years

at, and immediately succeeding, the sunspot minimum, an excess of 1 inch in the winter rainfall is accompanied by a defect of about 1·74 inches in the summer rainfall, and a defect of 1 inch during winter is accompanied by an excess of 1·74 inch during summer.

It is not my intention, for the present at least, to seek out the full meaning of these facts ; indeed, it is scarcely within my province to do so, as the investigation is already in more experienced hands than mine. But the facts forced themselves on my notice, and they seemed of sufficient importance to justify their publication.

VII.—*Description of a new Lepidopterous Insect belonging to the Heterocerous Genus* Trabala.—*By* F. Moore, F. Z. S., A. L. S. *Communicated by the* Natural History Secretary.

(Received August 26th ;—Read December 3rd, 1884.)

Trabala irrorata, n. sp.

♀. Upperside dark olivaceous ochreous-yellow, sparsely speckled with dark purple-brown scales, which are most numerously disposed on the exterior border, and sinuously across the inner disc of both wings and also subbasally across the forewing, as well as on the posterior border of the forewing. Both wings with a discal transverse zigzag series of large lilacine-grey spots, which are also thickly speckled with the dark brown scales ; forewing also with the posterior border blotched with lilacine-gray, and with a prominent lilacine-gray spot, with dark brown speckled border, in the middle of the cell. Cilia entirely yellow.

Underside slightly paler than the upperside ; both wings with the discal zigzag spots as above, the exterior borders less sparsely speckled with brown scales ; a slight brown-speckled sinuous discal band also on the hindwing ; cell-spot indistinct.

Body brighter yellow, and tuft lilacine-white.

Expanse 3¼ inches.

Hab. Mergui. Collected by Dr. J. Anderson, F. R. S.

VIII.—Phyllothelys, *a remarkable Genus of* Mantodea *from the Oriental Region.*—*By* J. Wood-Mason, *Deputy Superintendent, Indian Museum, Calcutta.*

(With Plate XII.)

Genus Phyllothelys, W.-M.

P. A. S. B. 1876, p. 176.—A. & M. N. H. 1876, 4th ser. vol. xviii, p. 507.—P. E. Soc. 1877, p. xviii.

♂. ♀. Vertex directed forwards and slightly upwards, strongly protuberant between the juxtocular lobes; the protuberance flat and triangular in front, behind convex and trefoil-shaped, being divided into three lobes, one large and median and two small, equal, and lateral; the former produced at the apex into a long, narrow, and very gradually tapering horn, which is expanded, together with the lobes themselves, in the middle line posteriorly and at the sides, into sharp foliaceous crests, and which may be rudimentary in the male; facial shield pentagonal, about as long as broad, marked with two blunt longitudinal ridges, and with its basal angle slightly projecting. Eyes oval, tolerably prominent, not narrowed as in *Phyllocrania*. Pronotum long and slender, nearly five times as long as its parallel-sided anterior lobe, very gradually widening from its narrowest part just behind the dilatation, and equally gradually increasing in height, to its base, close to which it bears a prominent smooth tubercle, and where it is nearly as wide as at the distinct dilatation; prosternum slightly and decreasingly roof-shaped from the insertion of the forelegs backwards. Anterior coxæ, long and slender, when laid back not reaching to the base of prothorax, their apical lobes not divergent, but close together; tibiæ half the length of the femora, with only the basal 5 or 6 of the spines of the outer edge curved towards the margin; femora with 3 spines on the outer edge and 4 on the disc; four posterior legs short; femora with genicular spines and with foliaceous lobes on the lower crest; tibiæ with their apical half inflated latero-superiorly. Axillary and anal veins of tegmina running one immediately after the other into the internal ulnar vein, first ulnar vein branched; ulnar vein of wings 2-branched. Abdomen depressed, widening more (♀) or less (♂) from base to end of 5th somite, the remaining somites forming a triangular figure with more or less serrated sides; the dorsal arc of its 10th somite roof-shaped, broader than long, subtriangular.

This interesting and curious form may be provisionally placed between the African genus *Phyllocrania* and the Oriental genus *Anaxarcha*.

1. Phyllothelys westwoodi, W.-M., Pl. XII, Figs. 1—2.

loc. supra cit.

♂.♀. Rich dark or light umber-brown of the colour of bark and dead and rotten leaves.

♀. Vertex greatly protuberant; the protuberance divided into three lobes, two small and hemispherical, lateral and basal, and one large, the median lobe of the vertex, flat, smooth, and triangular in front, but convex in every direction behind, and rounded at the apex, from which it suddenly gives off a long, slender, and very gradually tapering almost linear horn; the protuberance is marked off in front from the rest of the head by a transverse groove which corresponds to an imaginary straight line drawn tangentially to the upper surface of the eyes, and the sides of its median lobe and of the horn into which this is prolonged are expanded into foliaceous crests, which are turned up or rather back at their outer edges and, being longitudinally wrinkled on their anterior surface, are hence sharply marked off from the perfectly smooth primitive horn; this is raised, in the middle line of its posterior face, into a thin, sharp, and prominent crest, which is continued a short distance on to the protuberance itself, and, owing to the forward curvature of the horn, as well as to its own decrease in height from the base upwards, hence has its free edge distinctly arched. In the male, the horn and its parts are reduced to a quite rudimentary condition and are folded up into a soft, flexible, and slightly asymmetrical conical process only about 1 millim. in length. Facial shield pentagonal, fully as long as broad, with two distant and incomplete longitudinal ridges on its disc and a blunt spiniform tubercle projecting from its basal angle. Eyes rather prominent; not nearly so narrow as in *Phyllocrania*.

Prothorax greatly elongated and slender, devoid of all traces of foliaceous expansions; prosternum roof-shaped decreasingly from the setting-on of the forelegs backwards and thickly speckled with darker; pronotum narrowing behind the dilatation and then widening again, concomitantly increasing in height, to the base, where it is as broad as at the dilatation, and where it bears in the middle line an elongate and slightly bilobed smooth tubercle; with its lateral margins finely denticulate and with a well-developed supracoxal dilatation; its anterior lobe parallel-sided, with a median dorsal ridge lodged in a shallow depression; its posterior lobe provided with a raised median longitudinal ridge decreasing from the base forwards and becoming stronger again at the dilatation, where, like the ridge on the anterior lobe with which it is in unbroken continuity, it is lodged in a shallow depression.

The forelegs are long and slender. The coxæ are triquetrous and when laid back do not reach to the base of the prothorax; their inner face is coloured red-violet surmounted on the upper crest by yellowish marked with 10—13 minute elongate black spots lying at the bases of as many minute black spinules, between which are some very much more minute yellowish ones. The femora are very slightly sinuous above, but arched below; their outer face bears one distinct oblique bar and a minute mottling of a darker shade of brown than the ground-colour; their inner face is black, with the apex, a complete transverse bar nearer to the ungual groove than to the apex, and an oblong mark nearly midway between the ungual groove and the base on the upper half, all yellow; tibiæ jet-black internally and below, armed on the inner edge with 14—15 and on the outer edge with 16 teeth, the basal five only of which are more recumbent than the rest and even they do not nearly touch the margin, or even one another; the intermediate and posterior legs are short; they are ridged as in *Phyllocrania*; the posterior of their lower crests bears a foliaceous lobe divided by an emargination into a very small proximal and a much larger distal portion with a rounded and nearly entire margin; the tibiæ have no foliaceous crests, but, in lieu thereof, the proximal half swollen and thickened club-like laterodorsally, as in one or both of the same pairs of legs in the species of the tropical American genus *Acanthops* and its allies.

Organs of flight extending very little beyond the extremity of the abdomen, coloured. Tegmina coriaceous, opaque umber-brown anteriorly, posteriorly membranous and hyaline covered irregularly with brown-smoky spots, which tend in places to coalesce so as to form a coarse mottling; anal gusset reticulate, with the membranous meshes smoky and the net-work obsoletely lined with hyaline; the stigma elongate, polished. Wings with the anterior margin semiopaque umber-brown, the apex of the anterior area distinctly brown-spotted like the corresponding part of the tegmina; all the rest of the organs brown smoky-quartz-coloured, gradually increasing in intensity from the base to the outer margin, and tolerably distinctly lined with hyaline on both sides of the transverse veinlets.

Abdomen broad and depressed, gradually widening from its base to the end of the 4th somite, whence it widens with greater rapidity to the end of the 5th, the posterior angles of which are produced outwards; the rest of the abdomen forming a triangular mass the sides of which are slightly jagged owing to the production of the posterior angles of the dorsal arcs of the 6th and 7th somites; the terminal dorsal arc is crescent-shaped, longitudinally roof-shaped, and more than twice as broad as long.

The cerci are of the ordinary slender conical form and do not reach so far as the end of the ovipositor.

♂. Smaller and slenderer with the cephalic horn and its crests, as has been already stated, reduced to a rudimentary condition and all folded or shrivelled up together so as to form a soft and flexible projection no more than about a millimetre in length.

Organs of flight almost wholly membranous and hyaline. Tegmina with the marginal field semiopaque brown resolved into spots at the apex, with a few scattered groups of areolets in the discoidal area and the meshes of the anal gusset faintly smoky, and with some dark brown linear dashes on the longitudinal veins. Wings with their anterior margin pale brown spotted at the apex, the rest of these organs being very faintly iridescent-smoky, with obsolete double hyaline edgings to the transverse violets, from the base nearly to the outer margin, along which the smokiness and the longitudinal veins are alike darker, especially in the anterior area.

In the Tenasserim specimen of this sex the cephalic protuberance is more broadly rounded at the top and less produced, and the horn is more rudimentary (? in consequence of the specimen being a dried one), but there is no other apparent difference between it and the spirit-specimen from Assam described above, except perhaps in the tint (exaggerated in fig. 1) of the wings, which is slightly deeper in the latter.

Total length, ♀ 51, ♂ 40; height of head, from free margin of labrum to apex of horn, ♀ 14, ♂ 4·5, breadth of head between the eyes, ♀ 4·5, ♂ 3·75, length of horn, from a straight line drawn tangentially to the upper surface of the eyes, ♀ 10, ♂ 1·5; length of antennæ, ♀ 22, ♂ 22; length of pronotum, ♀ 22, ♂ 14·5, of its anterior lobe, ♀ 5, ♂ 3·3, of its posterior lobe, ♀ 17, ♂ 11·2, breadth of pronotum at supracoxal dilatation, ♀ 3·5, ♂ 2·75; length of fore-coxa ♀ 13, ♂ 9, femur, ♀ 14·5, ♂ 10, tibia, ♀ 8, ♂ 5·5, intermediate femur, ♀ 5·5, ♂ 4·5, tibia, ♀ 5, ♂ 4, posterior femur ♀ 7·5, ♂ 6, tibia ♀ 7, ♂ 5·5; length of tegmina ♀ 27, ♂ 27, breadth across middle ♀ 6·5, ♂ 6 millims.

Hab.—2 ♀ and 1 ♀ nymph, Sibságar, Assam (*S. E. Peal*), 1 ♂, Buxa, Bhutan (*Dr. Lewis Cameron*), and 1 ♂ Moolai, Upper Tenasserim (*Moti Ram*) in Indian Museum, Calcutta. A fine female is preserved in the British (Natural History) Museum, South Kengsington, London.

2. Phyllothelys paradoxum, n. sp., Pl. XII, Fig. 3.

♂ nymph. Nearly allied to the preceding, which it closely resembles in the relative proportions of its parts and in every detail of colour and ornamentation, but from the same sex of which it differs in the possession of a fully developed cephalic horn and from the opposite sex

in the form of this horn, which is slenderer, much more thinly foliaceous, and jagged, instead of entire, on the edges, so as to resemble a very narrow pinnately-cleft leaf, the mid and lateral ribs of which are represented by the thick and hence opaque axes of the horn and its lateral processes. The fore tibiæ have 16 teeth on the outer edge and 14 on the inner.

The only measurements of this immature insect that can usefully be given are :—length of pronotum 11, of fore femur 7, height of head, from free edge of labrum to top of horn, 7 millims.

Hab. Burmah.

This interesting animal was presented to me many years ago by my friend Mr. William Theobald of the Geological Survey of India.

Explanation of Plate XII.

Fig. 1. *Phyllothelys westwoodi*, W.-M., ♂, with wings extended, nat. size; 1 *a*. the head, viewed from in front, × 2; 1 *b*. the left fore-leg, from the inside, × 2.

Fig. 2. *Phyllothelys westwoodi*, ♀, with wings extended, nat. size; 2 *a*. the head, from behind, × 2; 2 *b*. the same, from in front, × 2; 2 *c*. the end of the abdomen, from above, × 2; 2 *d*. the posterior leg of right side, from in front, × 2.

Fig. 3. *Phyllothelys paradoxum*, n. sp., ♂ nymph, the head, from in front, × 3.

IX.—*Notes on Indian* Rhynchota, No. 1.—*By* E. T. Atkinson, B. A.

Unless where expressly stated to be descriptions, the notes attached to each species are merely intended as aids to identification; and the measurements of specimens not in the Indian Museum have been converted into millimetres from the measurements of the several authors.

HOMOPTERA.

Family Cicadidæ, Westwood, Introd. Mod. Class. Ins. ii, 420 (1840).

Stridulantia, Stål, Hem. Afric. iv, p. 1 (1866).

Ocelli three, placed on the disc of the vertex. Pronotum and mesonotum very large. Anterior coxæ prismatic, oblong, inserted in the anterior angles of the prostethium : intermediate and posterior coxæ briefly subconical, somewhat contiguous, remote from the sides of the body. Anterior femora incrassated, very often spinose, tibiæ smooth. Tarsi 2—3 jointed. Abdomen in the males with an organ of sound on each side at the base.

Genus Polyneura, Westwood.

Westwood, Arc. Ent. i, p. 92 (1842): Am. et Serv., Hist. Nat. Hém. p. 460 (1843): Stål, Hem Afric. iv, p. 3 (1866).

1. Polyneura ducalis.

Polyneura ducalis, Westwood, Arc. Ent. i, p. 92, t. 24, f. 2 (1842); Jardine, Nat. Lib. t. 18, f. 1 (1843); Am. et Serv., Hist. Nat. Ins. Hém. p. 460 (1843); Walker, List. Hom. B. M., i, p. 2 (1850).

Easily recognised by its rich golden brown colour and the apical half of the tegmina being finely reticulated with hexagonal cells. Body long 35; exp. teg. 102 millims.

Reported from Assam, Sikkim, Nepál. The Indian Museum possesses specimens from Sikkim and Assam.

Genus Pœcilopsaltria, Stål.

Hem. Afric, iv, p. 2, (1866); Berl. Ent. Zeitschr. p. 168 (1866).

Allied to *Tettigades*, Am. et Serv. Thorax angulated on each side, anterior femora not spinose, metasternum elevated, the elevated part sulcate, produced and subsinuato-truncated in front.

2. Pœcilopsaltria affinis.

Tettigonia affinis, Fabr., Syst. Rhyn. p. 37 (1803).

Cicada affinis, Germar in Thon's Archiv. Ent. ii, fasc. 2, p. 1, 6, (1830); in Silbermann's Rev. Ent. ii, p. 79 (1834); Walker, List Hom. B. M. i, p. 3 (1850).

Pœcilopsaltria affinis, Stål, Hem. Fabric. ii, p. 4 (1869).

Body long 23; exp. teg. 77 millims.

Reported from India, but no specimens appear in the British Museum list, and it would be well again to identify the locality of the specimen noted in Mus. Lund.

Genus Platypleura, Amyot & Serville.

Amyot et Serville, Hist. Nat. Ins. Hém. p. 465 (1843): Stål, Hem. Afric. iv, p. 2 (1866): Butler, Cist. Ent. i, p. 184 (1874).

(*a.*) *Species with yellow or tawny wings.*

3. Platypleura phalænoides.

Platypleura phalænoides, Walker, List Hom. B. M. i, p. 4 (1850): Butler, Cist. Ent. p. 185 (1874).

Platypleura interna, Walker, l. c. iv, p. 1119 (1852), which differs in having the anal angle only (instead of the whole flap) of the wings black.

Platypleura congrex, Stål, MS., is also possibly only a variety of this species.

Reported from Bengal, Assam, Silhat, N. India. A somewhat common species in Sikkim. The Indian Museum possesses specimens from Sibságar, Sikkim, and Darjiling.

An examination of some fifty males shows some variations in individuals, even amongst those collected in the same locality. In the hyaline apical portion of the tegmina, the brown band is sometimes connected with the marginal row of spots, sometimes with the brown band across the middle part of the tegmina, and sometimes with neither. The hyaline spots in the radial and 3—4 ulnar areas vary much in size, and the metathoracic markings vary in size and distinctness. The venation, too, is not altogether uniform, and the colour of the thorax varies from green to brown.

♀. Body sordidly luteous above and below. Face moderately convex, transversely sulcated, with a longitudinal groove, luteous, vertex and pronotum furrowed, luteous. The mesonotal marks are represented by two almost obsolete short black lines on fore border and two faint black dots on hinder border. Abdomen black above, first three segments marginally luteous-pubescent; below, central portion tawny, thickly pubescent. Opercula small, somewhat rounded, wide apart. Legs concolorous with body: posterior tibiæ spinose, tarsi and claws piceous. Tegmina, markings as in ♂, but basal half suffused with deep fulvous. Wings as in ♂, but apical third alone brown, limbus hyaline, flaps fulvous. Length body, 22½; exp. tegm. 75; of one tegmen 34; breadth of pronotum 13 millims.

Hab. Sikkim, one specimen only in the Indian Museum.

4. Platypleura assamensis, n. sp.

Sordid green, face very slightly convex, transversely sulcated, with a longitudinal groove: a fascia extending from eye to eye through the base of the antennæ, black. Rostrum extends to third abdominal segment, tip piceous. Markings above as in *P. phalænoides*, Walker. Abdomen piceous, each abdominal segment with a slight marginal fulvous pubescence. Opercula very small, wide apart piceous in the ♀; close together, piceous and margined with slight tawny in the ♂. Basal half of tegmina, brown, with irregular pale markings: a hyaline spot in the third quarter of the radial area, a pale spot at the base of the radial area and the 4—5 ulnar areas. Apical half of the tegmina pale hyaline; a brown patch extending through the apical anastomoses of the 1—3 ulnar areas: an inner apical row of six brown spots, first two and last broadest, first two confluent, middle sagittate, last confluent with the dot on the limbus: apical veins ending in six small oblong brown spots, beyond which in the limbus are six minute dots. Wings marked as in *P. phalænoides* with which it is closely allied, but the body is much less robust, and smaller; and there is a difference in the markings and colour of the tegmina. Length body, 23½; exp. tegm., 69; of single tegmen, 30; breadth of the pronotum 12, millims.

♂ is slightly smaller, tegmen, 27 millims.

Hab. Sibságar and Nága Hills: ♂ and ♀ in Indian Museum.

5. Platypleura nicobarica, n. sp.

Light ochraceous, shining. Face moderately convex, transversely sulcated, with a median longitudinal groove, an interrupted fascia extending from eye to eye, and a patch on each side of the base of the rostrum and along the first joint thereof, black. The rostrum extends well beyond the posterior coxæ, tip black. Eyes dull castaneous, pilose behind. Vertex deeply grooved, the hollows, a small triangular patch below the ocelli, a narrow fascia from eye to eye through the ocelli, and a narrow short longitudinal line between the ocelli and eyes, black. Pronotum furrowed, with a single, longitudinal, narrow, short, black line in the middle of the anterior margin, lateral processes subtriangular and their external margins brown. The mesonotum with two triangular black spots, their bases resting on the anterior margin, and on each side a large distinct V-shaped mark, slightly interrupted on the inner side, and two small round spots near the posterior margin. Segments of abdomen black, margined with yellow, above and below, slightly pubescent. Legs ochraceous, extremities of tibiæ and claws brown-black, posterior tibiæ spinose. Opercula ochraceous, small, rounded, contiguous, having a black patch near the base of posterior coxæ. Tegmina, basal half tawny with irregular brown markings in the radial and 1—4 ulnar areas and one in the costal membrane. The upper third of the third ulnar area and the apical areas hyaline, with an almost obsolete series of minute dots at the end of each vein: wings ochraceous, apical third brown, with veins ochraceous, a discal streak to anal angle and two lines confluent at the inner angle, brown. Length body, 24: exp. tegmina, $75\frac{1}{2}$ of single tegmen 33: breadth of the pronotum, $14\frac{1}{2}$ millims.

Hab. Nicobar Islands: in Indian Museum.

6. Platypleura sphinx.

Platypleura sphinx, Walker, List. Hom. B. M. i, p. 13 (1850): Butler, Cist. Ent. p. 188 (1874).

Tegmina whitish, brownish-tawny towards the base and having elsewhere some irregular pale-brown marks which here and there include white spots. Body long 18; exp. teg. 43 millims.

Reported from N. Bengal, N. India.

7. Platypleura cælebs.

Platypleura cælebs, Stål, Trans. Ent. Soc. 3rd Ser. i, p. 573 (1863): Butler, Cist. Ent. p. 188 (1874).

Allied to *Pœcilopsaltria capitata*, Olivier, (Enc. Méth. v, p. 754) in regard to size, broadness of apical limbus, tegmina and wings. Body long 23: exp. teg. 68 millims. Reported from N. India.

8. PLATYPLEURA ANDAMANA.

Platypleura andamana, Distant, Trans. Ent. Soc. p. 174 (1878).

This species was described from a specimen procured from the Andaman islands. Body long 22: exp. teg. 84 millims.

9. PLATYPLEURA ROEPSTORFFII, n. sp.

♂. ♀. Brownish tawny. Face gamboge colour, moderately convex, transversely sulcated, with a brown longitudinal groove. Rostrum extending almost to the posterior margin of the first abdominal segment, tip brown. Legs brown above, tawny below; tibiæ setose, posterior pair spinose. Eyes bright castaneous, moderately prominent, pilose behind. Second joint of antennæ pale tawny. A fascia from eye to eye, through the base of the antennæ and frons, and another through the ocelli, black. Pronotum grooved, with an obtuse-angled black mark on middle of posterior border; lateral processes subtriangular, anterior margin slightly brown. Mesonotum with two obconical spots extending backwards from anterior border and having between them a variable sagittate mark, two dots wide apart, near posterior border, and a very obscure mark situate on the outer side of each of the obconical spots, black. Abdominal sutures black, margined with luteous, pubescent; anal segment below, luteous. Opercula very small, subelliptical, wide apart in the ♂; contiguous, semi-rounded, in the ♀. Tegmina brown, opaque: basal third tinged with tawny, very apparent when stretched out; two spots in the radial area (the basal extending into the costal membrane) and one in the fourth ulnar area, black. A patch in the middle of the first ulnar area, extending into the third, and one near the base of the third ulnar area, extending into the fourth, pale brown. Apical area pale brown; veins adorned with oval marks, brown, with a centre of pale brown. External margin with a row of six subquadrangular brown spots, divided by oval pale brown spots. Wings fulvous tawny, disc and a band along the fore and external borders brown. Length of body, 24½; exp. tegm. 76½; of one tegmen, 34; breadth of pronotum, 12 millims.

Closely allied to *P. andamana*, Distant.

HAB. Andaman Islands. Several specimens are in the Indian Museum.

(b.) With black and white wings.

10. PLATYPLEURA BASIALBA.

Oxypleura basialba, Walker, List Hom. B. M. i, p. 26, (1850).
Platypleura basialba, Butler, Cist. Ent. i, p. 191 (1874).

Body long 19, exp. teg. 61 millims. Reported from N. Bengal.

11. Platypleura nobilis.

Cicada nobilis, Germar in Thon's Archiv. ii, fasc. 2, p. 9 (1830); in Silbermann's Rev. Ent. ii, pt. 2, p. 82, (1834).

Cicada hemiptera, Guérin, Voyage Bélanger Ind. Orient. p. 500 (1834).

Platypleura semilucida, Walker, List Hom. B. M. i. p. 20 (1850).

Platypleura nobilis, Butler, Cist. Ent. i, p. 191 (1874); Distant, J. A. S. B. xlviii, (2), p. 38 (1879).

Reported from Java, Singapore, and Tenasserim: there is a specimen in the Indian Museum from Tenasserim. As this is a typical species of the smaller members of this genus, I re-describe it, the original description being practically unobtainable.

Tawny. Face tawny, moderately convex, transversely sulcated with the furrows brown and a longitudinal groove broadly black. Rostrum extending to the fourth abdominal segment, tip piceous. Eyes dull castaneous, with a narrow black fascia, extending from anterior margin around the base of the antennæ. Vertex with a bright tawny fascia on anterior margin and two minute obconical black marks, extending from posterior margin on each side of the ocelli, obsolete in some. Pronotum tawny, furrowed, furrows black; a line from the middle of the anterior border to the posterior border, black and quadrangularly expanded on the disc. Mesonotum fulvous brown, with two moderate obconical black spots, extending backward from the fore border, midway between which there is a discal line connected with a fascia on the hinder border also black. On the outer side of both the moderate obconical spots is a large obconical patch, black, and extending from the fore border almost to the hind border. The metanotum is bright tawny. The abdominal sutures are black, edged with fulvous, slightly pubescent. Below, the fulvous margins of the abdominal segments alone appear. Opercula tawny, brown at the base, rounded, small, wide apart. Legs tawny, anterior and middle femora spotted brown, posterior tibiæ spinose. Tegmina, basal third tawny, with some irregular lighter markings: a hyaline spot, at the apex of the radial area, just above a dark brown spot which extends into the costal membrane: a black spot in the ulnar space. Apical two-thirds of tegmina hyaline, with three minute brown spots on the apical anastomoses of the first and second ulnar areas, also a very minute brown spot on each side of the middle of the vein separating the second from the third apical area and the third from the fourth; six minute brown spots on the limbus. Basal two-thirds of the wings brown, with a discal streak extending to the anal angle, tawny; apical third, hyaline; flaps tawny with a brown line on the suture. Length body 16; exp. teg. 46; length of one tegmen 24; breadth of pronotum 8 millims.

Variety, *a*.—Markings on face and pronotum more distinctly black. The markings on the basal third of the tegmina are more distinctly pale forming a band of five spots extending from the costal membrane through the ulnar areas. The brown spots in the hyaline apical portion broader, the internal apical row produced through the apical areas and the external apical row of dots duplicated. The tawny discal streak of the wings wanting, flaps grey hyaline. From Munipur, in Indian Museum. Allied to *Platypleura insignis*, Distant.

12. Platypleura insignis.

Platypleura insignis, Distant, J. A. S. B. xlviii (2), p. 39, t. 2, f., 2 (1879).

Allied to the preceding, but tegmina and wings very distinct, the opaque portion being much less than in that species. Body long 15; exp. teg. 45 millims. Reported from Tenasserim and Hindustan: a specimen from the former locality is in the Indian Museum.

(*c*.) *With black, white, and red wings.*

13. Platypleura octoguttata.

Tettigonia octoguttata, Fabricius, Ent. Syst. Suppl. p. 515 (1798); Syst. Rhyng. p. 39 (1803); Coquebert, Ill. Ins. i, p. 34, t. 9, f., 1 (1790).

Oxypleura sanguiflua, Walker, List Hom. B. M. i., p. 24 (1850); Ins. Saund. Hom. p. 2 (1858).

Pœcilopsaltria octoguttata, Stål, Berl. Ent. Zeitschr. x, p. 168 (1866) (re-described).

Platypleura octoguttata, Butler, Cist. Ent. i, p. 192 (1874).

Body long 27: exp. teg. 80 millims. Reported from the Panjab, N. India, N. Bengal, S. India. The Indian Museum possesses specimens from Bengal, Calcutta, and Sambhalpur in the Central Provinces.

14. Platypleura subrufa.

Oxypleura subrufa, Walker, List. Hom. B. M. i, p. 25 (1850).

Pœcilopsaltria capitata, Stål, Berl. Ent. Zeitschr. x, p. 169 (1866), who joins together '*subrufa*' and '*capitata*' Olivier (Enc. Méth. v, p. 754, t. 112, f. 10), the former an Indian and the latter a Ceylon species. They have been separated again by Butler (Cist. Ent. i, p. 192) and should remain separate.

Platypleura subrufa, Butler, Cist. Ent. i, p. 192 (1874).

Body long 27: exp. teg. 75 millims. Reported from Coromandel and India.

(*d*.) *With black, white, and brown wings.*

15. Platypleura bufo.

Oxypleura bufo, Walker, List Hom. B. M. i. p. 27 (1850).

Platypleura bufo, Butler, Cist. Ent. i, p. 195 (1874).

Body long 25: exp. teg. 81 millims. Reported from India.

16. Platypleura cervina.

Platypleura cervina, Walker, List Hom. B. M. i, p. 16 (1850) ♀ ; Butler, Cist. Ent. i, p. 198 (1874).

Platypleura straminea, Walker, l. c. p. 17, ♂.

Body long 17: exp. teg. 50 millims. Reported from N. Bengal.

Genus Tacua, Amyot & Serville.

Am. & Serv., Hist. Nat. Ins. Hém., p. 461 (1843): Stål, Hem. Afric. iv, p. 3. (1866).

17. Tacua speciosa.

Tettigonia speciosa, Illiger in Wied. Zool. Arch. ii, 145, t. 2; Fabricius, Syst. Rhyn. p. 33 (1803).

Cicada indica, Donovan, Ins. Ind. Hem., t. 2, f. 3, (1800).

Cicada speciosa, Blanchard, Hist. Nat. Ins. iii, 165; Hém. t. 9 (1840-41).

Tacua speciosa, Am. et Serv., Hist. Nat. Ins. Hém. p. 462 (1843); Walker, List. Hom. B. M. i, p. 46 (1850). J. A. S. Zool. i. p. 141 (1857).

Body long 55 millims. Reported from Java, Bengal (Donovan).

Genus Tosena, Amyot & Serville.

Am. & Serv., Hist. Nat. Ins. Hém. p. 462 (1843): Stål, Hem. Afric. iv. p. 3. (1866).

18. Tosena melanoptera.

Tosena melanoptera, White, A. & M. N. H. xvii, p. 331 (1846); Walker, List Hom. B. M. i, p. 46 (1850).

Body long 60: exp. teg. 142 millims. Reported from Silhat, N. India. The Indian Museum possesses specimens from Sibságar and Sikkim.

19. Tosena mearesiana.

Cicada mearesiana, Westwood, Arc. Ent. i, p. 98, t. 25, f. 1 (1842).

Tosena mearesiana, Am. & Serv., Hist. Nat. Ins. Hém. p. 463 (1843); Walker, List Hom. B. M. i, p. 46 (1850).

Body long 44: exp. teg. 130 millims. Reported from N. India. The Indian Museum possesses specimens from Sikkim.

20. Tosena albata.

Tosena albata, Distant, Trans. Ent. Soc. Lond. 1878, p. 175.

Body long 59: exp. teg. 132 millims. Reported from N. India.

21. Tosena splendida.

Tosena splendida, Distant, Ent. Month. Mag. xv, p. 76 (1878).

♂. Body long 47: exp. teg. 124 millims. ♀. Body long 49; exp. teg. 127. Reported from Assam, Nága Hills, Khasiya Hills. The Indian Museum possesses ♂ and ♀ from the Lushai country.

Genus Huechys, Amyot & Serville.

Am. & Serv., Hist. Nat. Ins. Hém. p. 464 (1843) : Stål, Hem. Afric. iv, p. 4 (1866).

22. Huechys philæmata.

Tettigonia philæmata, Fabricius, Syst. Rhyn. p. 42 (1803) ; Stoll, Cig. p. 53, t. 13, f. 62 (1788).

Cicada philæmata, Germar in Thon's Archiv. ii, fasc. 2, p. 26 (1830) ; in Silbermann's Rev. Ent. ii, p. 75, n. 52 (1834) ; Burmeister, Handb. Ent. ii, (i) p. 180 (1835).

Cicada sanguinea, Guérin, Voyage La Favorite, v, p. 155 (1839) ; Mag. Zool. p. 75 (1839).

Huechys philæmata, Am. & Serv., Hist. Nat. Ins. Hém. p. 465 (1843) ; Walker, List Hom. B. M. i. p. 251 (1850).

Guérin (l. c.) unites this species with the following and keeps *H. sanguinolenta*, Fabr., which he had not seen, distinct, but he is not followed in this arrangement by later writers.

Body above black with the frons, two quadrate patches on mesothorax, and abdomen sanguineous : tegmina brown, wings cindery-grey and subhyaline. Body long 22 millims.

Reported from Philippine Islands, N. Bengal, and Silhat. The Indian Museum possesses specimens from the Nága Hills, N. India, and Tenasserim.

23. Huechys sanguinea.

Cicada sanguinea, De Géer, Ins. iii, 221, t. 33, f. 17 (1773) ; Gmelin Ed. Syst. Nat. i, 3, 2098 (1782) ; Westwood in Donovan's Ins. China, t. 16, f. 1 (1842).

Tettigonia sanguinolenta, Fabricius, Syst. Ent. p. 681 (1775) ; Spec. Ins. ii, p. 321 (1781) ; Mant. Ins. ii, p. 267 (1787) ; Ent. Syst. iv, p. 25 (1794) ; Syst. Rhyn. p. 42 (1803).

Cicada sanguinolenta, Olivier, Enc. Méth. v, p. 756 (1790) ; Germar in Thon's Archiv, ii, fasc. 2, p. 3 (1830), in Silbermann's Rev. Ent. ii, p. 75 (1834) ; Blanchard, Hist. Nat. Ins. iii, p. 165 (1840-41) ; Guérin, Voyage La Favorite, v, p, 155, t. 45, f. 1 (1839) ; Mag. Zool. p. 76, t. 237, f. 1 (1839).

Huechys sanguinea, Am. & Serv., Hist. Nat. Ins. Hém. p. 465 (1843) ; Walker, List Hom. B. M. i, p. 251 (1850) ; J. L. S. Zool. i, p. 84 (1856) ; ibid., x, p. 95 (1867) : Distant, J. A. S. B. xlviii, (2) p. 38 (1879).

Guérin separates '*sanguinolenta*, Fabricius' and unites '*philæmata*' with '*sanguinea*'. *H. incarnata*, Germar, Silb. Rev. Ent. ii, p. 75, (1834), and Brullé Hist. Nat. Ins. Hém. ii, t. 3. f. 2, is probably only a variety of *H. sanguinea*.

Head, thorax, and feet black : frons, two great spots on the mesothorax, and abdomen sanguineous : tegmina black : wings fuscous. Body long 18 ; exp. teg. 41½ millims.

Reported from India, Singapore, China, and the Eastern Archipelago. Specimens exist in the Indian Museum from Sikkim, Sibságar, Calcutta, and Tenasserim.

24. Huechys testacea.

Tettigonia testacea, Fabricius, Mant. Ins. ii p. 267 (1787); Ent. Syst. iv, p. 24 (1794); Syst. Rhyn. p. 42 (1803): Stoll, Cig. p. 41, t. 8, f. 41 (1788).

Cicada testacea, Gmelin Ed. Syst. Nat. i, pt. 4, p. 2098 (1782); Olivier, Enc. Méth. v, p. 756, t. 113, f. 5 (1790); Germar in Thon's Archiv. ii, fasc. 2, p. 3, (1830); Guérin, Voyage La Favorite, v, p. 155 (1839); Mag. Zool. p. 78 (1839).

Huechys testacea, Walker, List Hom. B. M. i, p. 252 (1850).

The upper surface of the body without red marks: tegmina brown, only partly transparent: wings concolorous, veins black: abdomen sanguineous.

Reported from Coromandel.

25. Huechys phœnicura.

Cicada phœnicura, Germar in Silbermann's Rev. Ent. ii, p. 76 (1834); Guérin, Icon. du Règne Animal, p. 78 (1830-34).

Huechys phœnicura, Walker, List Hom. B. M. i, p. 252 (1850).

Black, entire frons, mesothorax, and abdomen sanguineous; tegmina and wings black; sometimes frons black in the middle and thorax with a black basal spot or band running through it, sides and small median spot red.

Reported from India, Sikkim.

26. Huechys transversa.

Huechys transversa, Walker, List Hom. B. M. Suppt. p. 40 (1858).

Black: tegmina with costa and transverse veins red and a testaceous band. Body long 23: exp. teg. 62 millims.

Reported from Hindustan.

27. Huechys thoracica.

Huechys thoracia, Distant, J. A. S. B. xlviii, (2), p. 39, t. II, f. 3 (1879).

Known by the red hour-glass-shaped fascia on pronotum. Body long 19: exp. teg. 43 millims.

Reported from Tenasserim and Hindustan.

28. Huechys trabeata.

Cicada trabeata, Germar in Thon's Archiv, ii, fasc. 2, p. 3 (1830): Guérin, Mag. Zool. p. 78 (1839).

Huechys trabeata, Walker, List Hom. B. M. i, p. 252 (1850).

Body ferruginous, tegmina and wings fuscous with ferruginous veins. Body long, $20\frac{1}{2}$ millims; tegmina broken at the ends.

Reported from Java.

There is a specimen in the Indian Museum, locality unknown.

Genus Scieroptera, Stål.

Hem. Afric. iv, p. 4 (1866).

Allied to *Gæana*: ulnar veins contiguous at the base or united for a short distance; head scarcely narrower than the base of the thorax; anterior femora incrassated, spinose beneath.

29. Scieroptera crocea.

Cicada crocea, Guérin in Voyage La Favorite, v, p. 159, t. 45, f. 3 (1829); Mag. Zool. p. 79, cl. ix, t. 237, f. 3 (1839); in Voyage La Coquille, Zool. ii (2), p. 182 (1830).

Huechys crocea, Walker, List Hom. B. M. i, p. 252 (1850).

Scieroptera crocea, Stål, Berl. Ent. Zeitschr. x, p. 169 (1866).

Yellow: thorax above with four reddish brown spots: abdomen saffron-red, more obsolete below. Feet yellow, tibiæ and tarsi black. Tegmina and wings hyaline with yellow veins.

Reported from Bengal.

30. Scieroptera splendidula.

Tettigonia splendidula, Fabricius, Syst. Ent. p. 681 (1774); Spec. Ins. ii, p. 321 (1781); Mant. Ins. ii, p. 267 (1787); Ent. Syst. iv, p. 25 (1794); Syst. Rhyn. p. 42 (1803).

Cicada splendidula, Gmelin Ed. Syst. Nat. i, pt. 4, p. 2098 (1782): Olivier, Enc. Méth., v, p. 756 (1790): Germar in Thon's Archiv, ii, fasc. 2, p. 45 (1830): Guérin, in Voyage La Favorite, v, p. 159 (1839); Mag. Zool. p. 79 (1839): Westwood in Donovan's Insects China, t. 16, f. 4 (1842).

Huechys splendidula, Walker, List Hom. B. M. i, p. 252 (1850).

Scieroptera splendidula, Stål, Berl. Ent. Zeitschr. x, p. 169 (1866): Distant, J. A. S. B. xlviii (2), p. 38 (1879).

Yellow; thorax above with four large blackish rounded spots. Tegmina golden brown: anterior tibiæ red, femora black: posterior femora red: abdomen sanguineous. Body long 17: length of one teg. $19\frac{1}{2}$ millims.

Reported from N. India, Silhat, Tenasserim. The Indian Museum possesses specimens from Tenasserim, Arakan, and the Khasiya Hills.

31. Scieroptera fumigata.

Huechys fumigata, Stål, Ofvers. Kong. Vet. Akad. Förh. p. 244 (1854); Walker, List Hom. B. M. Suppt. p. 314 (1858).

Scieroptera fumigata, Stål, Berl. Ent. Zeitschr. x, p. 169 (1866).

Head, thorax, and scutellum black; their lateral margins, a median patch on the thorax, and spot on the scutellum yellow: tegmina fusco-vinaceous, costa and veins weakly yellow testaceous; wings weakly vinaceous hyaline, abdomen and femora testaceous, the former above blackish. Body long 12: exp. teg. 28 millims.

Reported from India.

Genus Graptotettix, Stål.

Hem. Afric. iv, p. 4 (1866).

Allied to *Gæana:* tegmina with ten apical cells: vertex twice as wide as the eyes: anterior femora spinose beneath; tibiæ longer than femora.

32. Graptotettix guttatus.

Graptotettix guttatus, Stål, Berl. Ent. Zeitschr. x, p. 170 (1866).

Blackish with the frons, four oval spots on the thorax, two large spots on the scutellum, and the abdomen sordidly yellow: tegmina and wings fuscous. Body long 25: exp. teg. 67 millims.

Reported from the Himálaya. The Indian Museum has a specimen from Sikkim.

Genus Gæana, Amyot & Serville.

Hist. Nat. Ins. Hém. p. 463 (1843).

33. Gæana octonotata.

Cicada octonotata, Westwood, Arc. Ent. ii, p. 34, t. 57, f. 2, ♀ (1843).
Huechys octonotata, Walker, List Hom. B. M. i, p. 253 (1850).

Easily recognised by the tegmina brown with four yellowish spots and the wings roseate. Body long 37: exp. teg. 61 millims.

Reported from Assam. The Indian Museum possesses specimens from Sikkim.

34. Gæana dives.

Tosena dives, Westwood, Arc. Ent. i, p. 98, t. 25, f. 2 (1842): Am. et Serv. Hist. Nat. Ins. Hém. p. 464 (1843): Walker, List Hom. B. M. i, p. 46 (1850).

Black: tegmina with reddish veins and a median transverse, narrow whitish band: wings testaceous, apical part black. Body long 25: exp. teg. 75 millims.

Reported from Silhat. The Indian Museum possesses specimens from Sikkim.

35. Gæana consors.

Gæana consors, White, Proc. Zool. Soc. 1850; Walker, List Hom. B. M. i, p. 253 (1850).

Close to *G. festiva*, but differing in the markings on the tegmina. Body long 29: exp. teg. 84 millims.

The Indian Museum possesses specimens from the Nága Hills and Samaguting in Assam. One specimen has the body above and below black without a single spot or mark except a testaceous tinge on the lower part of the face; and the markings on the tegmina are dark green.

36. Gæana festiva.

Tettigonia festiva, Fabricius, Syst. Rhyn. p. 41 (1803).

Cicada thalassina, Percheron, Gen. Ins. (Hém.), t. 2 (1834) : Guérin, Voyage La Coquille, Ins. p. 183 (1838).

Cicada percheronii, Guérin, Icon. Règne Animal, p. 355 (1838).

Gœana consobrina, White, Proc. Zool. Soc. 1850 ; Walker, List Hom. B. M. i, p. 254 (1850).

Gœana festiva, Stål, Berl. Ent. Zeitschr. x, p. 170 (1866) ; Hem. Fabr. ii, p. 5 (1869).

Black : a testaceous band across the face from eye to eye and around each eye : four narrow longitudinal yellow lines on the thorax. Tegmina bluish green or greenish yellow, the radial area with a small and larger spot below, a median band, three confluent apical patches, and a broad apical limbus, black : wings white or bluish, apical part black with a white or bluish spot on the disc. Body long 33 : exp. teg. 80 millims.

Reported from Assam, Bengal.

The Indian Museum possesses specimens from Darjiling and Sikkim. Some of these have the tegmina green, others greenish yellow, and, in some, the wings have the basal portion and a discal spot bright testaceous not white or pale, the size and arrangement of the markings on the body and tegmina remaining exactly the same.

37. Gæana maculata.

Tettigonia maculata, Fabricius, Syst. Ent. App. p. 831 (1775) ; Spec. Ins. ii, p. 319 (1781) ; Mant. Ins. ii, p. 266 (1787) ; Ent. Syst. iv, p. 20 (1794) ; Syst. Rhyn. p. 37 (1803).

Cicada maculata, Drury, Ill. Nat. Hist. ii, p. 69, t. 37, f. 1 (1773) ; Gmelin, ed. Syst. Nat. i, pt. 4, p. 2100 (1782) : Olivier, Enc. Méth. v, p. 750, t. 112, f. 4 (1790) : Germar in Thon's Archiv. ii, fasc. 2, p. 12 (1830) ; in Silbermann's Rev. Ent. ii, p. 74 (1834).

Gœana maculata, Am. et Serv., Hist. Nat. Ins. Hém. p. 464 (1843) ; Walker, List Hom. B. M. i, p. 253 (1850).

♀. Black shining : two yellow spots on vertex between the eyes, one below each eye : six on mesonotum, four in front, two behind. Tegmina black, with five spots, two basal (of which one within radial area is minute) and three larger subequal median spots, whitish yellow : a white dot in 1—3 ulnar and in all the apical areas except the last. Wings black, basal part sordidly white and a sub-apical row of five white dots. A form of the ♂ has, instead of the dots or spots in the ulnar and apical areas, broad smears of dirty white, and is also larger than the ordinary ♀. Body long 32 : exp. teg. 92 millims, ♀ : body long 40 exp. teg. 97 millims. , form last mentioned.

The Indian Museum possesses specimens from Sikkim, Khasiya Hills, Samaguting, and the Dhansiri Valley.

38. Gæana sulphurea.

Cicada sulphurea, Hope, in Royle's Ill. Bot. Him., Introd., p. liv, t. 10, f. 2 (1839).

Cicada pulchella, Westwood, Arc. Ent. ii, p. 34, t. 57, f. 1. (1843).

Gœana sulphurea, Walker, List Hom. B. M. i, p. 254 (1850).

Black; head, pronotum, and mesonotum spotted sulphureous: tegmina and wings sulphureous for the basal two-thirds; apical third blackish-fuscous: tegmina with a blackish-fuscous median band: abdomen beneath and on each side at the tip, spotted yellow. Body long 38: exp. teg. 90 millims.

Reported from Nepal and N. India.

The Indian Museum possesses specimens from Sikkim and N. India.

Genus Dundubia, Am. & Serv.

Am. et Serv., Hist. Nat. Ins. Hém. p. 470 (1843): Stål, Hem. Afric. iv. p. 5 (1866).

Head triangular: frons large, very convex, transversely sulcated, with a longitudinal groove in the middle: pronotum not ampliated on the lateral margins: cheeks without a tubercle: rostrum not or barely reaching the base of the posterior coxæ: opercula long, extending beyond the middle of the venter, very often to the last segment.

This and the remaining genera of this group have been so imperfectly worked out, and the synonymy is so defective, that it is impossible for any one in this country to do more than indicate the recorded species. Walker's work here is particularly untrustworthy, and his descriptions quite unintelligible.

39. Dundubia mannifera.

Cicada mannifera, Linnæus, Mus. Ad. Fried. p. 84 (1754), excluding synonymy.

Tettigonia vaginata, Fabricius, Mant. Ins. ii, p. 266 (1787); Ent. Syst. iv, p. 18 (1794); Syst. Rhyn., p. 35 (1803).

Cicada vaginata, Gmélin Ed. Syst. Nat. i, pt. 4, p. 2099 (1782); Olivier, Enc. Méth. v, p. 748 (1790); Stoll, Cig. p. 38, t. 7, f. 35 (1788).

Cicada virescens, Olivier, Enc. Méth. v, p. 747 (1790) t. 110, f. 2; Walker, List Hom. B. M. i, p. 64 (1850).

Dundubia vaginata, Am. et Serv., Hist. Nat. Ins. Hém. p. 471 (1843); Walker, List Hom. B. M. i., p. 47, 1120, (1850); J. L. S. Zool. x, p. 84 (1867).

Dundubia mannifera, Stål, Berl. Ent. Zeitschr. x, p. 170 (1866): Distant, J. A. S. B. xlviii, (2), p. 38 (1879); Trans. Ent. Soc. p. 634 (1881).

Body pale yellow-olive or virescent, spotless; tegmina and wings hyaline, spotless, costa of the former black or brown; opercula almost as long as the abdomen, narrowed near the base, thence oval, rounded at the tip, testaceous or pale green. ♂. Body long 43: exp. teg. 110 millims.

Reported from Morty, Sumatra, Tenasserim, Assam.

The Indian Museum possesses specimens from Java, Tenasserim, and Sikkim.

40. Dundubia microdon.

Dundubia microdon, Walker, List Hom. B. M. i, p. 55 (1850).

Body long, 34: exp. teg. 88 millims. Reported from N. India.

41. Dundubia lateralis.

Dundubia lateralis, Walker, List Hom. B. M. i, p. 61 (1850).

Body long, 29: exp. teg. 87 millims. Reported from Silhat.

42. Dundubia intemerata.

Dundubia intemerata, Walker, J. L. S. Zool. i, p. 84 (1856).

Pale testaceous: tegmina and wings hyaline, spotless, the costa of the former tawny, veins green. Opercula acute, triangular, narrow, extending to fifth ventral segment. Body long 21: exp. teg. 72 millims.

Reported from Singapore.

The Indian Museum possesses specimens from Tenasserim, Dhansiri-valley, Sibságar, Nága Hills, Samaguting.

43. Dundubia vibrans.

Dundubia vibrans, Walker, List Hom. B. M. i, p. 54 (1850): J. L. S. Zool. x, p. 84 (1867).

Body pale tawny, wings colourless, pale tawny at the base; apex of tegmen slightly clouded with brown. Body long 36: exp. teg. 92 millims.

Reported from Silhat.

44. Dundubia nicomache.

Dundubia nicomache, Walker, List Hom. B. M. i, p. 67 (1850).

Body long 22: exp. teg. 85 millims. Reported from N. India.

45. Dundubia tigrina.

Dundubia tigrina, Walker, List Hom. B. M. i, 69 (1850).

Body long 23: exp. teg. 69 millims. Reported from Malabar.

The Indian Museum possesses specimens from Assam?

46. Dundubia maculipes.

Dundubia maculipes, Walker, List Hom. B. M. i, p. 70 (1850).

Body long 25: exp. teg. 71 millims. Reported from N. Bengal.

47. Dundubia samia.

Dundubia samia, Walker, List Hom. B. M. i, p. 77 (1850).

Body long 28: exp. teg. 71 millims. Reported from N. India.

48. Dundubia singularis.

Dundubia singularis, Walker, List Hom. B. M. Suppt. p. 7 (1858).

Body long 19: exp. teg. 62 millims. Reported from India.

49. Dundubia radha.

Dundubia radha, Distant, Trans. Ent. Soc. p. 634 (1881).

Allied to *D. mannifera*, Linn., from which it differs by the much broader head, attenuated apices of the opercula, and its much larger size. In superficial appearance, it bears a strong resemblance to the genus *Cosmopsaltria*. (*Distant*). Body long 53: exp. teg. 124 millims.

Reported from Madras Presidency and Mussooree.

50. Dundubia tripurasura.

Dundubia tripurasura, Distant, Trans. Ent. Soc. p. 635 (1881).

This species is allied to *D. vibrans*, Walker, from which it structurally differs by the long and subtriangular opercula. The abdomen is also broader, the tegmina unspotted, and the sanguineous colour of the abdomen and opercula are also somewhat peculiar and distinct. (*Distant*). Body long 33: exp. teg. 85 millims.

Reported from Assam.

51. Dundubia nagarasingna.

Dundubia nagarasingna, Distant, Trans. Ent. Soc. p. 635 (1881).

Distant writes:—'I am somewhat at a loss for a closely allied species with which to compare it, but its distinct colour and markings and shape and the length of the opercula should sufficiently distinguish it.' Body long 39: exp. teg. 95 millims.

Reported from N. W. Burma.

52. Dundubia immacula.

Dundubia immacula, Walker, List Hom. B. M. i, p. 50 (1850).

Body fawn colour, wings whitish. Body long 40: exp. teg. 102 millims. Reported from Tenasserim.

Genus Melampsalta, Kol.

Melet. Ent. vii. p. 27 (1857).

53. MELAMPSALTA VARIANS.

Cicada varians, Germar in Silbermann's Rev. Ent. ii, p. 59 (1834).
Dundubia varians, Walker, List Hom. B. M. i, p. 48 (1850); iv, p. 1120 (1852): Suppt. p. 6 (1858).
Dundubia chlorogaster, Walker (*nec* Boisduval), l. c. p. 47, ♀.
Melampsalta varians, Stal, A. S. E. F. (4 Sér.) i. p. 619 (1862).

Reported from Silhat.

Genus COSMOPSALTRIA, Stål.

Hem. Afric. iv, p. 5 (1866).

In Ofvers. Kong. Vet. Aka. Förh. p. 708 (1870), Stål distributes this genus amongst three subgenera:—*Platylomia* to which *C. flavida*, Guérin, belongs; *Cosmopsaltria* to which *C. spinosa*, Fabr., belongs; and *Diceropygia* to which *C. obtecta*, Fabr., belongs. *Cosmopsaltria* is closely allied to *Dundubia*; cheeks without a tubercle; rostrum reaching the base or most often the apex of the posterior coxæ; opercula long, extending beyond the middle of the venter.

54. COSMOPSALTRIA OBTECTA.

Tettigonia obtecta, Fabricius, Syst. Rhyn. p. 35 (1803).
Cicada obtecta, Germar, in Thon's Archiv, ii, fasc. 2, p. 5 (1830).
Dundubia obtecta, Walker, List Hom. B. M. i, p. 47 (1850).
Cosmopsaltria obtecta, Stål, Hem. Fabr. 2, p. 4 (1869).

Reported from N. India, N. Bengal, Nepál and Assam. Body long 25: exp. teg. 85 millims.

Specimens in the Indian Museum are from Sikkim and Assam.

55. COSMOPSALTRIA SITA.

Cosmopsaltria sita, Distant, Trans. Ent. Soc. p. 636 (1881).

It is difficult to separate this and the two following species from the genus *Dundubia* except by the length of the rostrum. They also resemble the '*vibrans*' group of that genus. Body long 24: exp. teg. 73 millims.

Reported from S. India or Bombay. (*Distant*).

56. COSMOPSALTRIA DURGA.

Cosmopsaltria durga, Distant, Trans. Ent. Soc. p. 637 (1881).

This species in size and markings (excluding the spotted tegmina) much resembles *Dundubia tripurasura*, Distant; the less produced frontal portion of the head and the length of the rostrum, however, place it in this genus (*Distant*). Body long 33: exp. teg. 98 millims.

Reported from Assam.

57. COSMOPSALTRIA ABDULLA.

Cosmopsaltria abdulla, Distant, Trans. Ent. Soc. p. 639 (1881).

This is a large and distinct species, near *C. doryca*, Boisd., from

which it differs by its large size, more spotted tegmina, and different size and structure of the opercula. Body long 46: exp. teg. 116—122 millims.

Reported from Penang and Singapore.

58. Cosmopsaltria oopaga.

Cosmopsaltria oopaga, Distant, Trans. Ent. Soc. p. 641 (1881).

This species is also allied to *C. doryca*, Boisd., but the body is much broader, the tegmina are unspotted, and the shape of the opercula more like those of *C. abdulla*, Distant. Body long 39: exp. teg. 96 millims.

Reported from Burma.

59. Cosmopsaltria spinosa.

Tettigonia spinosa, Fabricius, Mant. Ins. ii, p. 266 (1787); Ent. Syst. iv, p. 17 (1794); Syst. Rhyn. p. 34 (1803).

Cicada spinosa, Olivier, Enc. Méth. v, p. 748 (1790).

Dundubia spinosa, Walker, List Hom. B. M. i, p. 47 (1850).

Cosmopsaltria spinosa, Stål, Berl. Ent. Zeitsch. x, p. 171 (1866); Ofvers. Kong. Vet. Aka. Förh. p. 708 (1870).

Varies much in size and coloration. Tegmina towards the apex of the veins sometimes immaculate and sometimes with fuscous spots.

Reported from India.

60. Cosmopsaltria flavida.

Cicada flavida, Guérin, Voyage Belanger in Ind. Orient. p. 498, t. 3, f. 1, (1834); Walker, List Hom. B. M. i, p. 118 (1850).

Dundubia saturata, Walker, List Hom. B. M. Suppt. p. 6 (1858).

Cosmopsaltria flavida, Stål, Berl. Ent. Zeitschr. x, p. 171 (1866).

Body long 45: exp. teg. 140 millims. Reported from Java and Sikkim.

Genus Leptopsaltria, Stål.

Hem. Afric. iv, p. 5 (1866).

Allied to *Dundubia*, Am. et Serv.; cheeks with a tubercle near the apex; rostrum extending a little beyond the posterior coxæ; opercula short: second and third segments of the abdomen in the ♂ with a lateral tubercle.

61. Leptopsaltria guttularis.

Cicada guttularis, Walker, List Hom. B. M. Suppt. p. 29 (1858), ♀.

Leptopsaltria guttularis, Stål, Hem. Ins. Philip. in Ofvers. Kong. Vet. Akak. Förh. p. 710 (1870), ♂.

Very like *L. tuberosa*, Sign., but differs in the opercula being more obtuse, apex much less obliquely truncated, exterior apical part more obtuse, less produced, ventral tubercles of the ♂ larger, black. Body long 13: exp. teg. 46 millims.

Reported from Burma.

There are several unnamed species of this genus in the Indian Museum.

Genus Pomponia, Stål.

Hem. Afric. iv, p. 6 (1866).

Allied to *Cosmopsaltria*: opercula short, somewhat transverse: rostrum reaching at least to the base but most often to the apex of the posterior coxæ. Stål (Ofvers. K. V.-A. Förh. p. 710, 1870) separates the subgenera *Pomponia* and *Oncotympana*.

62. Pomponia urania.

Dundubia urania, Walker, List Hom. B. M. i, p. 64 (1850).
Pomponia urania, Stål, Berl. Ent. Zeitschr. x, p. 171 (1866).

Hind-scutcheon bright green; abdomen green. Body long 34: exp. teg. 83 millims.

Reported from Hindustan.

63. Pomponia bindusara.

Pomponia bindusara, Distant, Trans. Ent. Soc. p. 642 (1881).

This species, above, resembles *Dundubia vibrans*, Walker, and *Cosmopsaltria sita*, Distant. Many of these Indian species belonging to the genera *Dundubia*, *Cosmopsaltria*, and *Pomponia* have a common facies in colour and markings which Distant thinks is probably due to mimetic resemblance, and which, in practice, renders their identification exceedingly difficult. Body long, 30: exp. teg. 87 millims.

Reported from Tenasserim.

64. Pomponia linearis.

Dundubia linearis, Walker, List Hom. B. M. i, p. 48 (1850). Var., l. c. iv, p. 1120 (1852).
Dundubia ramifera, Walker, var., l. c. p. 53 (1850): J. L. S. Zool. x, p. 84 (1867).
Dundubia cinctimanus, Walker, List l. c., p. 49 and Suppt. p. 6 (1858): J. L. S. Zool. x, p. 84 (1867).
Pomponia linearis, Stål, Berl. Ent. Zeitschr. x, p. 171 (1866).

Body tawny. Body long 46: exp. teg. 118 millims.

Reported from Silhat.

The Indian Museum possesses a specimen from Assam.

65. Pomponia kama.

Pomponia kama, Distant, Trans. Ent. Soc. p. 643 (1881).

Allied to *P. transversa*, Walker, but much smaller, abdomen narrowed and more linear, head broader in comparison with pronotum and colour different. Body long 18: exp. teg. 66 millims.

Reported from N. India, Darjiling.

66. Pomponia madhava.

Pomponia madhava, Distant, Trans. Ent. Soc. p. 644 (1881).

Allied to *P. tigroides*, Walker, from which it differs by its being pale greenish and unicolorous, the tegmina broader, with the costal margin irregularly curved and not deflexed at the termination of the radial veins, and also in having both the second and third abdominal segments beneath rounded, produced and pointed anteriorly. Body long 22: exp. teg. 55 millims.

Reported from Assam.

67. Pomponia imperatoria.

Cicada imperatoria, Westwood, Arc. Ent. ii, p. 14, t. 51, (1843): Walker, List Hom. B. M. i, p. 47: J. L. S. Zool. i, p. 83 (1856): ibid. x, p. 84 (1867).

Pomponia imperatoria, Stål, Berl. Ent. Zeitschr. x, p. 171 (1866).

A very large species, yellow luteous, body long 88, exp. teg. 209 millims.

Reported from Nepál.

68. Pomponia tigroides.

Pomponia tigroides, Distant, J. A. S. B. xlviii (2), p. 38 (1879).

The Indian Museum possesses a specimen from Tenasserim.

Genus Emathia, Stål.

Hem. Afric. iv, p. 8 (1866).

Inner ulnar area of tegmina not widened towards the apex; apical cells one and two extending equally far forward; thorax widened at the base: tympana chiefly exposed; opercula short: anterior femora spinose.

69. Emathia ægrota.

Emathia ægrota, Stål, Berl. Ent. Zeitschr. x, p. 172 (1866).

Body long 20: exp. teg. 50 millims. Reported from Bombay.

Genus Cicada, Linn.

Linnaeus, Syst. Nat. i, p. 704 (1766): Stål, Rio. Jan. Hem. ii, p. 19 (1862) Ofvers K. V. A. Förh. p. 714 (1870).

70. Cicada subtincta.

Cicada subtincta, Walker, List B. M. i, p. 147 (1850).

Body long 32: exp. teg. 105 millims. Reported from Silhat.

71. Cicada anæa.

Cicada anæa, Walker, l. c., p. 207 (1850).

Body long 13: exp. teg. 40 millims. Reported from N. Bengal.

72. Cicada aurata.

Cicada aurata, Walker, l. c., p. 215 (1850).

Body long 17: exp. teg. 42 millims. Reported from Assam.

73. Cicada subvitta.

Cicada subvitta, Walker, l. c., p. 222 (1850).

Body long 16: exp. teg. 38 millims. Reported from N. India.

74. Cicada ferruginea.

Cicada ferruginea, Olivier, Enc. Méth. v, p. 750, t. 112, f. 1 (1790); Stoll, Cig. p. 65, t. 16, f. 86 (1788); Walker, List Hom. B. M. i, p. 117 (1850).

Reported from India.

75. Cicada xantes.

Cicada xantes, Walker, List Hom. B. M. i, p. 198 (1850).

Body, drums, and legs tawny: wings colourless, veins yellow. Body long 17: exp. teg. 48 millims.

Reported from N. India.

76. Cicada maculicollis.

Cicada maculicollis, Guérin, Voyage La Coquille, Zool., p. 183 (1830); Walker List Hom. B. M. Suppt., p. 28 (1858).

Body long 24: exp. teg. 65 millims. Reported from Bengal.

Genus Cryptotympana, Stål.

A. S. E. F. (4 Sér.), i, p. 613 (1862).—Hem. Afric. iv, p. 6 (1866).

77. Cryptotympana recta.

Fidicina recta, Walker, List Hom. B. M. i, p. 79 (1850) ♀.
Cryptotympana recta, Distant, J. A. S. B. xlviii (2), p. 40, t. ii, f. 4 (1879), ♂.

Body long 32: exp. teg. 95 millims. Reported from Silhat and Tenasserim.

The Indian Museum possesses a specimen from Tenasserim.

78. Cryptotympana vicina.

Cicada vicina, Signoret, Rev. Mag. Zool., p. 410, t. 10, f. 4 (1849).
Fidicina vicina, Walker, List Hom. B. M. i, p. 90 (1850).
Cryptotympana vicina, Stal, A. S. E. F. (4 Sér.) i. p. 613 (1862).

Reported from Silhat.

The Indian Museum possesses specimens from the Bhutan Duárs.

79. Cryptotympana immaculata.

Cicada immaculata, Olivier, Enc. Méth. v, p. 749, t. 112, f. 7 (1790) : Stoll, Cig. p. 40, t. viii, f. 39 (1788) : Signoret, Rev. Mag. Zool. p. 410 (1849).
Fidicina immaculata, Walker, List Hom. B. M. i, p. 90 (1850) ; iv, p. 1121 (1852).
Cryptotympana immaculata, Stål, A. S. E. F. 4 Sér. i. p. 613 (1862).

Reported from N. Bengal.

80. Cryptotympana intermedia.

Cicada intermedia, Signoret, Mag. Rev. Zool. p. 406, t. 10, f. 2 (1849).
Fidicina intermedia, Walker, List Hom. B. M. i, p. 90 (1850).
Cryptotympana intermedia, Stål, A. S. E. F. 4 Sér. i. p. 613 (1862).

Abdomen reddish yellow with a blackish band on each segment : allied to *C. atrata*, Fabr.

Reported from Tenasserim.

Genus Fidicina, Amyot & Serville.

Amyot et Serville, Hist. Nat. Ins. Hém. p. 472 (1843) : Stål, Rio. Jan. Hem. ii, p. 18 (1862) ; Ann. Soc. Ent. Fr. (4 sér) i, p. 614 (1861) ; Hem. Afric. iv, p. 7 (1866) ; Distant, Biol. Cen. Amer. p. 16 (1881).

81. Fidicina operculata.

Cicada operculata, Carreno.
Fidicina operculata, Walker, List Hom. B. M. i, p. 90 (1850).

Reported from N. India.

The Indian Museum possesses a specimen.

82. Fidicina corvus.

Fidicina corvus, Walker, List Hom. B. M. i, p. 86 (1850).

Reported from Silhat. Body long 29 : exp. teg. 113 millims.
The Indian Museum possesses a specimen of the ♀ from Silhat.

Genus Tibicen, Latreille.

Latreille, Fam. Nat. p. 426 (1825) : Stål, Hem. Afric. iv, p. 25 (1866).

83. Tibicen aurengzebe.

Tibicen aurengzebe, Distant, Trans. Ent. Soc., p. 646 (1881).

Body long 18 : exp. teg. 48 millims. Reported from Bombay Presidency.

84. Tibicen apicalis.

Cicada apicalis, Germar in Thon's Archiv, ii, fasc. 2, p. 8 (1830) ; in Silbermann's Rev. Ent. ii, p. 63 (1834) ; Walker, List Hom. B. M. i, p. 161 (1850).
Tibicen apicalis, Stål, A. S. E. F. 4 Sér., i, p. 618 (1862).

Body long 18 : exp. teg. 48 millims., ♀. Reported from N. India.
The Indian Museum possesses a specimen from Calcutta.

Genus Mogannia, Amyot & Serville.

Amyot et Serville, Hist. Nat. Ins. Hém, p. 467 (1843) : Stål, Hem. Afric. iv. p. 5 (1866).

85. Mogannia illustrata.

Mogannia illustrata, Am. et Serv., Hist. Nat. Ins. Hém. p. 467, t. 9. f. 4 (1843) ; Walker, List Hom. B. M. i, p. 248 (1850).

Body uniform ferruginous brown : basal half of tegmina and a small semicircular patch on the tips, transparent yellow, a brown transverse band across the middle. Body long, 12 millims.

Reported from N. India.

86. Mogannia recta.

Mogannia recta, Walker, List Hom. B. M. Suppt. p. 39 (1858).

Abdomen with a red band on the posterior border of each segment. Body long, 12 millims.

Reported from Hindustan.

87. Mogannia obliqua.

Mogannia obliqua, Walker, List Hom. B. M. Suppt. p. 39 (1858).

♀. green mostly reddish beneath : abdomen reddish with a spot on each side near the base. Pronotum and mesonotum with some testaceous marks. Body long, 14 : exp. teg. 41 millims.

Reported from Hindustan.

88. Mogannia venustissima.

Mogannia venustissima, Stål, Ofvers. Kong. Vet. Aka. Förh. p. 154 (1865).

Cærulean or metallic black. Tegmina with the veins at the base pale sanguineous, before the middle black, thence sordid straw-colour : wings with the veins at the base sanguineous and thence piceous. Body long, 16 : exp. teg. 37—41 millims.

Reported from E. India.

89. Mogannia funebris.

Mogannia funebris, Stål, Ofvers. Kong, Vet. Aka. Förh. p. 155 (1865).

Aeneous black. Tegmina, before the middle, black with the basal areola and a band towards the apex of the black part sordid lutescent. ♀ Body long, 19 : exp. teg. 46 millims.

Reported from Silhat.

90. Mogannia indicans.

Mogannia indicans, Walker, List Hom. B. M. i p. 249 (1850).

♂ bright or dark red, ♀ black. Tegmina with a broad basal brown band, veins yellow. Body long 12—16 : exp. teg. 35—40 millims.

Reported from China.

The Indian Museum possesses specimens from Sikkim.

91. Mogannia locusta.

Cephalozys locusta, Walker, List Hom. B. M. i, p. 236 (1850).

Body ferruginous beneath and abdomen pale tawny. Body long 50: exp. teg. 85 millims.

Reported from E. India.

92. Mogannia lacteipennis.

Cephalozys lacteipennis, Walker, List Hom. B. M. i, p. 237 (1850).

Body luteous: abdomen black with the hind borders of the segments tawny: tegmina and flaps white, opaque, luteous at the base. Body long 36: exp. teg. 97 millims (?).

Reported from N. India.

93. Mogannia quadrimacula.

Cephalozys quadrimacula, Walker, List Hom. B. M. p. 238 (1850).

Body bright tawny: hind margins of abdomen having the borders of the segments with slender interrupted reddish bands, a broad pale tawny band near the tip and beneath, piceous. Body long 30: exp. teg. 53 millims.

Reported from N. India.

94. M. terpsichore.

Cephalozys terpsichore, Walker, List Hom. B. M. p. 239 (1850).

Body apple-green: abdomen with two last segments pitchy above: tegmina colourless, tinged with brown towards the tips, costa green. Body long 25: exp. teg. 74 millims.

Reported from E. India.

Correction and Addition.

Page 213, 4 lines from top of page, *for* "nicobarica," *read* "distincta," the former of these names being praeoccupied; and, between the 10th and 11th lines from bottom of page, *insert*

"5* Platypleura nicobarica.

Platypleura nicobarica, Butler, Ann. & Mag. Nat. Hist. April, 1877.

Reported from the Nicobars."

X.—*List of the Lepidopterous Insects collected in Cachar, by* Mr. J. Wood-Mason, Part I,—Heterocera.—*By* F. Moore, F. Z. S., A. L. S. *Communicated by the* Natural History Secretary.

[Received August 26th ;—Read December 3rd, 1884.]

Sphinges.

1. Macroglossa belis, Cram., Pap. Exot. i. pl. 94, fig. C.
2. Macroglossa luteata, Butler, P. Z. S. 1875, p. 241, pl. 37, fig. 5.
3. Macroglossa gilia, H. Schæff., Samml. Exot. Schmett. pl. 23, fig. 107.
4. Macroglossa gyrans, Walk., Catal. Lep. Het. Brit. Mus. viii, p. 91.
5. Lophura pusilla, Butler, P. Z. S. 1875, p. 244.
6. Hæmaris hylas, Linn. (Cram., Pap. Exot. pl. 148, fig. B.).
7. Calymnia panopus, Cram., Pap. Exot. pl. 224, fig. A, B.

Bombyces.

8. Melittia eurytion, Westw., Cab. Orient. Ent. pl. 30, fig. 5.
9. Eusemia communis, Butler, Ann & Mag. Nat. Hist. 1875, p. 140, pl. 13, fig. 1.
10. Eusemia bellatrix, Westw., Cab. Orient. Ent. pl. 33, fig. 2.
11. Nyctalemon zampa, Butler, Ent. Monthly Mag. v. p. 273.
12. Syntomis atkinsoni, Moore, P. Z. S. 1871, p. 245, pl. 18, fig. 2.
13. Euchromia polymena, Linn. (Cram., Pap. Exot. pl. 31, fig. D.
14. Milionia zonea, Moore, P. Z. S. 1872, p. 569.
15. Nyctemera lacticinia, Cram., Pap. Exot. pl. 128, fig. E.
16. Pitasila varians, Walker (Butler, Types Lep. Het. B. M. v. pl. 88, fig. 4).
- *17. Tryphæromera plagifera, Walk. (Butler, l. c., pl. 88, fig. 3).
18. Euschema militaris, Linn. (Cram., Pap. Exot. pl. 29, fig. B).
19. Histia papilionaria, Guérin, Mag. de Zool. 1831, p. 12.
20. Cyclosia papilionaris, Drury, Exot. Ins. pl. 11, fig. 4.
21. Cyclosia panthona, Cram., Pap. Exot. pl. 322, fig. C.
22. Chalcosia argentata, Moore, Desc. Lep. Coll. Atkinson, p. 17.
23. Pidorus glaucopis, Drury, Exot. Ins. pl. 6, fig. 4.
24. Heterusia magnifica, Butler, Trans. Ent. Soc. 1879, p. 5.
25. Heterusia edocla, Dbleday, Zoologist, ii, p. 469.

26. Devanica bicolor, Moore, n. sp.

Female: forewing black, crossed by a yellow outwardly oblique medial band; veins indistinctly lined with blue: hindwing yellow, with a black marginal band, which is broad and truncated at the apical end and very narrow at anal end; base of wing also slightly black. Body, legs, and antennæ bluish-black. Expanse 1½ inch.

This species is nearest allied to *D. risa* (*Eterusia risa*, Dbleday).

27. Pintia ferrea, Walk. (Butler, Types Lep. Het. B. M. pl. 83, fig. 7.

28. Trypanophora humeralis, Walk., Catal. Lep. Het. B. M. vii, p. 1593.

29. Hypsa alciphron, Cram., Pap. Exot. pl. 133, fig. E.

*30. Hypsa plaginota, Butler, Types Lep. Het. B. M. pl. 87, fig. 7.

31. Hypsa heliconia, Linn. (Walk., Catal. Lep. Het. B. M. ii, p. 452.

32. Hypsa clavata, Butler, Trans. Ent. Soc. 1875, p. 317.

33. Hypsa marmorea, Walk., Catal. Lep. Het. B. M. p. 1674.

34. Philona inops, Walk. (Butler, Types Lep. Het. B. M. pl. 87, fig. 6).

35. Bizone bianca, Walk., Catal. Lep. Het. B. M. vii, p. 1684.

36. Barsine gratiosa, Guerin, Delessert's Voy. pl. 26, fig. 1.

37. Barsine conjunctana, Walk. (*tessellata*, Butler, Types Lep. Het. B. M. pl. 86, f. 12).

38. Alope ocellifera, Walk., Catal. Lep. Het. B. M. iii, p. 620.

39. Aloa sanguinolenta, Fabr., Ent. Syst. iii, 1, p. 473.

40. Creatonotus diminuta, Walk. (Butler, Types Lep. Het. B. M. pl. 85, fig. 5).

41. Rhodogastria astrea, Drury, Ins. ii, pl. 28, fig. 4.

42. Orgyia albifascia, Walk., Catal. Lep. Het. B. M. Suppl. p. 325.

43. Artaxa subfasciata, Walk., l. c. Suppl. p. 332.

44. Redoa submarginata, Walk. (Butler, Types Lep. Het. B. M. pl. 89, fig. 3).

45. Perina basalis, Walk., Catal. Lep. Het. B. M. iv, p. 966.

46. Numenes insignis, Moore, Catal, Lep. E. I. C. ii, pl. 10, fig. 6.

47. Lymantria obsoleta, Walk., Catal. Lep. Het. B. M. iv, p. 880.

48. Trabala vishnu, Lefebvre, Zool. Journ. iii, p. 207.

49. Dreata testacea, Walk., Catal. Lep. Het. B. M. iv, p. 905.

50. Cricula trifenestrata, Helfer, Journ. As. Soc. Beng. 1873, p. 45.

51. Aphendala divaricata, Moore, n. sp.

Female. Upperside pale purplish brownish ochreous: forewing with a slender dark ochreous-brown band curving upward from poste-

rior margin at one-third from the base to one-third before the apex, and from which a straight erect similar band extends from its costal end to the posterior angle. Body dark ochreous-brown. Expanse 1⅝ inch. Taken at Silcuri.

52. Natada rugosa, Walk. Catal. Lep. Het. B. M. v. p. 1109.

[53. Zeuzera, sp. The larvæ, pupæ, and perfect insects observed by J. Wood-Mason. The 'borer' of tea-planters.].

Noctues.

54. Prodenia ciligera, Guén., Noct. i, p. 164.
55. Amyna selenampha, Guén., Noct. i, p. 406.
56. Alamis umbrina, Guén., Noct. iii, p. 4.
57. Xanthodes transversa, Guén., Noct. ii, p. 211.
58. Varnia ignita, Walk., Catal. Lep. Het. B. M. xxxiii, p. 825.
59. Anophia olivescens, Guén., Noct. iii, p. 48.
60. Athyrma, sp. ?
61. Calesia hæmorrhoda, Guén., Noct. iii, p. 258.
62. Remigia frugalis, Fabr. (Walker, Catal. Lep. Het. B. M. xiv, p. 1507).
63. Remigia archesia, Cram., Pap. Exot. pl. 273, fig. F. G.
64. Callyna jaguaria, Walk., Catal. Lep. Het. B. M. xiii, p. 1809.
65. Sericea substruens, Walk., l. c. xiv, p. 1276.
66. Lygniodes hypoleuca, Guén., Noct. iii, p. 125.
67. Argiva hieroglyphica, Drury, Exot. Ins. ii, pl. 2, fig. 1.
68. Nyctipao crepuscularis, Cram. (Walk., Catal. Lep. Het. B. M. xiv, p. 1304).
69. Nyctipao obliterans, Walk., l. c. xiv, p. 1307.
70. Hulodes caranea, Cram., Pap. Exot. pl. 269, fig. E. F.
71. Lagoptera honesta, Hubn. (Walk. Catal. Lep. Het. B. M. xiv, p. 1352).
*72. Ophideres salaminia, Cram., Pap. Exot. pl. 174, fig. A.
73. Ophideres fullonica,
74. Spirama cohærens, Walk., Catal. Lep. Het. B. M. xiv, p. 1321.

[75. Eumeta crameri. The larvæ observed by J. Wood-Mason. The 'leaf-insect' of planters.]

[76. Eumeta, sp. The larvæ observed by J. Wood-Mason. The 'stick-insect' of planters.]

Geometres.

77. Lagyra talaca, Walk., Catal. Lep. Het. B. M. xx, p. 59.
78. Urapteryx crocopterata, Kollar, Hügel's Kasch. ix, p. 483.

79. Buzura multipunctaria, Walk., Catal. Lep. Het. B. M. xxvi, p. 1531.
80. Elphos scolopaica, Drury, Exot. Ins. ii, pl. 22, fig. 1.
81. Macaria nora, Walk., Catal. Lep. Het. B. M. xxiii, p. 934.
82. Naxa textilis, Walk., l. c. vii, p. 1743.
83. Micronia caseata, Guén., Phal. ii, p. 27.
84. Micronia aculeata, Guén., l. c. ii, pl. 13, fig. 8.
85. Argyris ocellata, H. Sch. (Walk., Catal. Lep. Het. B. M. xxii, p. 807.
86. Acidalia, sp. ?
87. Abraxas martaria, Guén, Phal. ii, p. 205.

Pyrales.

88. Astura punctiferalis, Guen., Delt. et Pyral. p. 320.
89. Euglyphis procopialis, Cram., Pap. Exot. pl. 368, fig. E.

Crambices.

90. Apurima xanthogastrella, Walk., Catal. Lep. Het. B. M. xxvii, p. 194.

Tineines.

*91. Nosymna repletella, Walk., Catal. Lep. Het. B. M. xxix, p. 831.
92. Sagora rutilella, Walk., Characters of Und. Lep. Het. p. 101 (1869).

[The insects before whose names an asterisk (*) is prefixed were captured on Nemotha, a peak of the North Cachar Hills about 3300 feet high. All the rest were taken at Silcuri, Borakhai, Silduby, Dharmkhal, Durgakuna, Doarbun, Irangmara, Doloo, Subong, and other tea-gardens in the plains. The only species of any interest to tea-planters are the *Zeuzera* and the two case-bearers belonging to the genus *Eumeta*, descriptions of which will be published hereafter elsewhere. J. W-M.]

XI.—*Revised Synopsis of the Species of* Chœradodis, *a remarkable Genus of* Mantodea *common to India and Tropical America.*—*By* J. Wood-Mason, *Officiating Superintendent of the Indian Museum, and Professor of Comparative Anatomy in the Medical College, Calcutta.*

(With 15 Woodcuts.)

Since the former version of this Synopsis was published, some additional material has fallen into my hands, by the aid of which I have been enabled to establish the existence of two distinct Indian species, and to identify with certainty a larva which I had previously assigned with hesitation to *Ch. rhombicollis*.

Two Indian species have been described, one by Fabricius under the name of *Mantis cancellata*, and the other by De Saussure as *Ch. squilla* from a perfect male insect and a larva. The recent discovery of the true female of the latter proves that the insects I had previously considered to be females and abnormal males of it represent a different species, to which I have the less hesitation in applying the Fabrician name that Prof. Westwood has named a female from Saugor in the Oxford Museum *Ch. cancellata*.

De Saussure has described and figured one of the remarkable larvæ of the genus—that of his *Ch. squilla*—, and pointed out the close resemblance it bears to that of an American species; De Borre has recently figured a larva of *Ch. rhombicollis* which is nearly intermediate in age between my figures 3 and 4; a larva of *Ch. rhomboidea* is preserved in the British Museum; and I give figures of the larvæ of three additional species and also of an earlier stage of *Ch. squilla*; so that, counting the larva of *Ch. strumaria* figured by Mérian, larvæ of no less than 7 out of the 9 species recognized by me are now known.

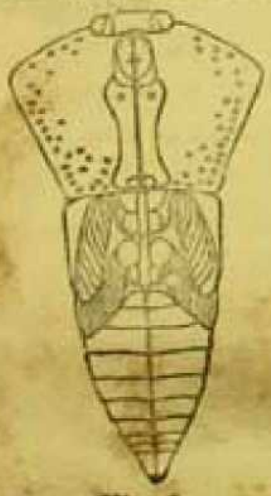


Fig. 1.
Chœradodis cancellata.
♀ nymph.

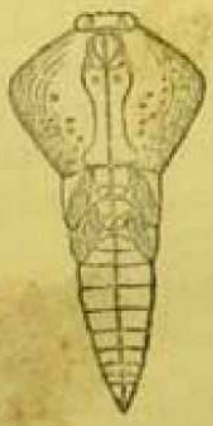


Fig. 2.
Ch. brunneri.
♂ nymph.

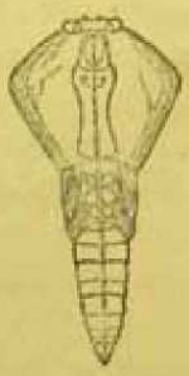


Fig. 3.
Ch. servillei.
♂ nymph.

Fig. 4.
Ch. squilla.
♀ nymph.

The close similarity of these larvæ to one another furnishes a remarkable confirmation of the view that the adults are congeneric.

Genus Chœradodis, Serville.

A. Fore femora without a black blotch on the inner side.

1. Chœradodis strumaria.

Madame Mérian, Ins. de Surinam, 1726, tab. 27, ♀ et nymph.

Roesel von Rosenhof, Der monatlich-herausgegebenen Insecten Belustigung, 2ter Theil, 1749, Locust tab. iii, fig. 1 et 2, ♀ et nymph (copied from Mérian).

Mantis strumaria, Linn., Syst. Nat. Ins. t. i, pt. ii, 1767, p. 691, no. 13, ♀.

——— ——— Fabr., Ent. Syst. ii, 1793, p. 18, no. 21, ♀.

——— *cancellata*, Stoll, Spectres et Mantes, pl. xi, fig. 42, ♀ (*non* Fabr.).

Chœradodis cancellata, Serville, Hist. nat. des Orthopt. 1839, p. 206, ♀ (*non* Fabr.).

——— *cancellata*, Saussure, Mant. Americ. p. 19, ♂, ♀.

——— *strumaria*, Wood-Mason, J. A. S. B. xlix, pt. ii, p. 82, 1880, ♀.

Madame Mérian was the first to figure a species of this genus. Her figures were named and described by Linnæus, whose description applies to the perfect female insect, his name having obviously been suggested by a fanciful resemblance of the swellings on the sides of the pronotum in the supposed nymph to series of scrofulous tumours (*strumæ*).

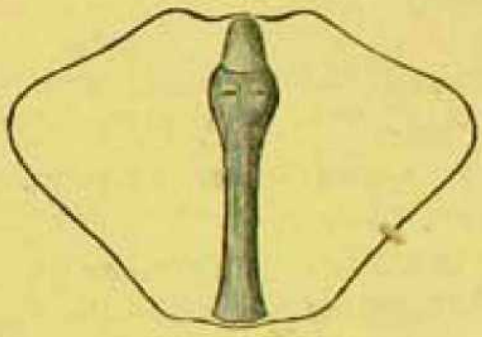


Fig. 3. ♀.

The accompanying outline drawing of the pronotum of a specimen when superposed upon the same part of Mérian's figure, accurately coincides therewith.

Stoll's figure 42 without doubt represents a specimen of the same species.

Hab Cayenne (♀, *Serville*) ; Surinam (♀, *Mérian*, *Stoll* ; ♂ ♀, De *Saussure*).

B. Fore femora with a black blotch on the inner side.

(a.) The blotch on the lower half of the joint (American).

In the females of the following two species, the posterior angles of the pronotal expansions are broadly rounded and are not produced backwards beyond the level of the hinder end of the primitive pronotum.

2. Chœradodis rhombicollis.

Mantis rhombicollis, Latr. in Voy. de Humb., Zool., Ins. p. 103, pl. 39, figs. 2, 3, ♂.
Chæradodis peruviana, Serville, Hist. nat. des Orthopt. 1839, p. 207, ♂.
———— *strumaria*, Stål, Syst. Mant., 1877, p. 15, ♂ ♀.
———— *rhombicollis*, Wood-Mason, l. c. p. 82 ♂ ♀.—De Borre, Liste des Mant. Mus. Roy. de Belg. 1883, p. 5; et Comptes-rendus Soc. Ent. Belg. Nov. 1883, ♀ et nymph fig.

The blotch commences, in both sexes, near the base of the femur, extends through the ungual groove nearly to the middle of the joint, and is there succeeded by a marginal row of black points in contact with the bases of alternate spines.

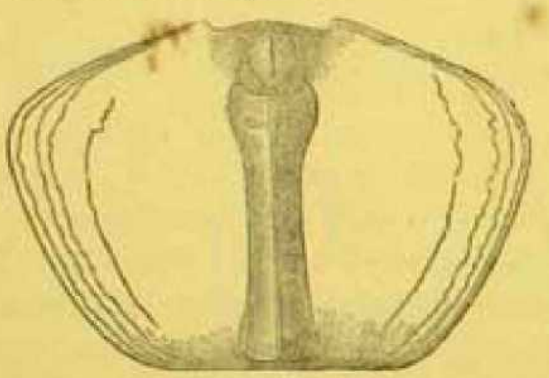


Fig. 7, ♀.

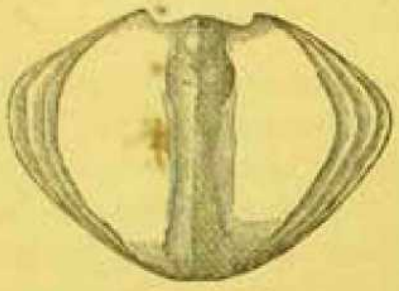


Fig. 6, ♂.

Hab. ♂ ♀, Guayaquil, in the collection of the British Museum; New Granada (♂ ♀, Stål); ♀ et nymph, Ecuador, in Mus. Roy. Belg.

3. Chœradodis servillei.

Wood-Mason, l. c. p. 83, ♀ et nymph.

♀. Closely allied to the preceding, from which it differs in having the marginal field of the tegmina proportionately narrower, and in the smaller size, as well as in the different shape, of the femoral blotch, which

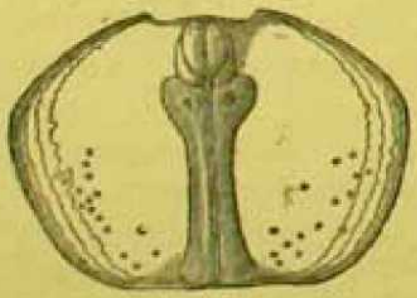


Fig. 8, ♀.

is small and oval, commences just beyond the ungual groove, and is followed by a marginal row of small black points.

Hab. 2 ♀, Cache, Costa Rica, in the collection of Messrs. Godman and Salvin and of the Indian Museum; nymph (Fig. 3), Chiriqui, in the collection of the Indian Museum, Calcutta.

4. Chœradodis brunneri.

Wood-Mason, J. A. S. B., 1882, xli, p. 21, ♀ et nymph.

♀. Closely allied to *Ch. rhombicollis*, Latr., and *Ch. Servillei*, W.-M., differing from both in the size, shape, and position of the femoral blotch, which is nearly thrice as long as broad, extends rather further in front of the ungual groove than it does behind it, and is followed by four black puncta arranged along the lower margin of the joint at the bases of alternate spines), and in having the posterior margin of the pronotum slightly convex instead of concave; from the former in its much narrower and from the latter in its rather broader tegmina; and from the latter in the upper margin of its fore femora being coarsely granulated, and sinuous instead of straight, in which latter respect it approaches the former.

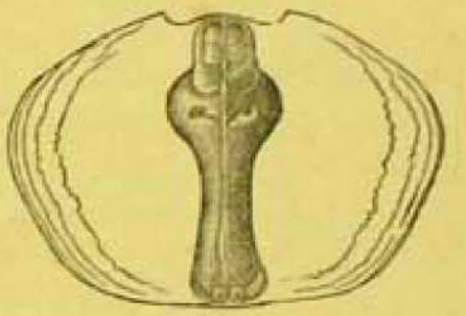


Fig. 9, ♀.

Hab. ♀ and nymph (Fig. 2), Santa Fé de Bogotá, New Granada, in coll. Ind. Mus. Calcutta.

In the females of the next two species, and, in all probability, in those of *Ch. rhomboidea* also, the posterior angles of the pronotal lamellæ are rounded-angulate and produced backwards, so that the hinder end of the primitive pronotum projects in the bottom of an angular emargination.

5. Chœradodis laticollis.

Chœradodis laticollis, Serville, Revue, p. 24; Hist. nat. des Orthopt. 1839, p. 208, pl. iv, fig. 2, ♀.

——— ——— Saussure, Mantes Americ. p. 20, ♀.

——— *strumaria*, Id., ibid. p. 18, ♂.

——— *laticollis*, Stål, Syst. Mant. 1877, 17, ♀.

——— ——— Wood-Mason, J. A. S. B. 1880, vol. xlix, pt. ii, p. 83, ♂ ♀.

The blotch is situated, in both sexes, just beyond the ungual groove, is oblong-rhomboidal in shape, and is followed by two black points on the bases of alternate spines; there is a fuscous speck at the end of the stig-

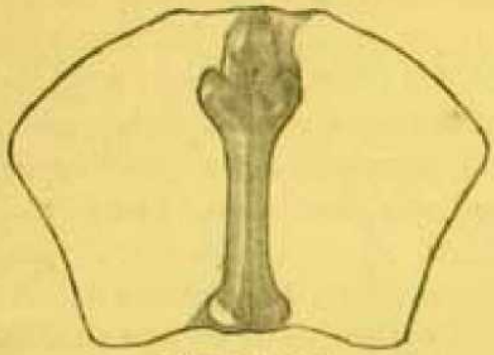


Fig. 11, ♀.

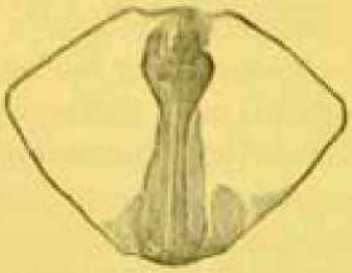


Fig. 10, ♂.

matal spot of the tegmina; and the antero-lateral margins of the pronotal lamellæ are arcuate or convex, especially in the female.

Hab. 5 ♂, 5 ♀, Ecuador, in the collection of the Indian Museum, Calcutta; Peru (♀, Stål); Cayenne (♀, *Serville* et Stål); Surinam (♂, *Saussure*).

6. Chœradodis stalii.

Wood-Mason, l. c. p. 83, ♂ ♀.

Differs from the preceding in the shape of the blotch (which is pointed at both ends and commences in the ungual groove, and on either side of which the femur is pale luteous-yellow instead of being clouded with fuscous); in being without a fuscous speck at the distal end of the

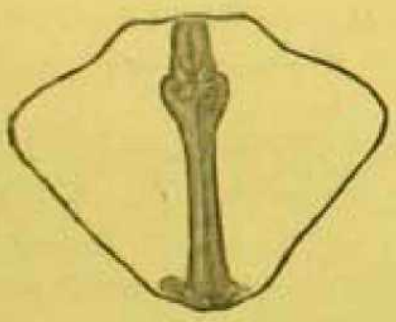


Fig. 13, ♂.

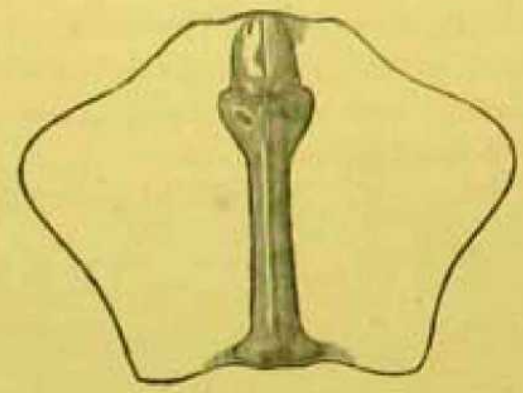


Fig. 12, ♀.

stigma; in its shorter and differently shaped facial shield; and in having the antero-lateral margins sinuous-concave and the lateral angles of the pronotal expansions more broadly rounded off.

Hab. 1 ♂, 4 ♀, Ecuador, in the Museums of Calcutta and Oxford.

7. Chœradodis rhomboidea.

Mantis rhomboidea, Stoll, Spectres et Mantes, pl. xi, fig. 45, ♂.
Chœradodis rhomboidea, Wood-Mason, l. c. p. 84, ♂.

A male insect from Pará, in the British Museum, agrees neither with Saussure's description (*loc. supra cit.* p. 18), nor with any of the speci-

mens in the Indian Museum; it more nearly approaches Stoll's figure, agreeing therewith in the points in which it differs from the former.

The blotch commences in the ungual groove, thence extending as far along the femur as in the preceding four species, but it is not followed by a marginal row of black points. The pronotal lamellæ have no posterior angles, their postero-lateral margins dwindling away to nothing posteriorly.

Hab. ♂, Pará, in the collection of the British Museum. A nymph, from Ega, in the same collection, probably also belongs to this species.

This species is nearest allied to *Ch. laticollis*.

(*β.*) *The blotch on the upper half of the joint* (Indian).

8. Chœradodis cancellata.

Mantis cancellata, Fabr., Ent. Syst. ii, 1793, p. 18.
Chœradodis squilla, Lucas, Ann. Ent. Soc. Fr. 5 sér. ii, 1872, p. 32, ♀.
——— ——— Wood-Mason, l. c. p. 48 *(ex parte)*.

Pronotum dissimilar in the sexes, being much less dilated in the male than in the female; its antero-lateral and postero-lateral margins not forming an angle at their junction in the female.

Femoral blotch narrower, confined to the foliaceous crest of the joint, and bordered below by a band of enamel-like bright emerald-green.

In the shape and extent of the pronotal expansions, the male of this species much resembles the same sex of *Chœradodis rhomboidea*, differing, however, strikingly therefrom in its much shorter pronotum. The female approaches and differs from those of *Chœradodis rhombicollis* and its allies in the same respects.

Hab. India *(Fabricius)* generally, from Ceylon, through Madras and Central India (♀ in coll. Hop. Oxon.), to the banks of the Killing River on the N. E. Frontier (nymph [Fig. 1] in coll. Ind. Mus. Calc.)

Obs. A specimen of this species in the British Museum is erroneously labelled "Brazil."

9. Chœradodis squilla.

Chœradodis squilla, Saussure, Mél. Orthopt. t. i, 3me fasc. p. 161, pl. iv, fig. 3, 3a, ♂ et nymph.
? —— —— Lucas, Ann. Entom. Soc. Fr. 5 sér. t. ii, 1872, p. 32, ♀.
—— —— Wood-Mason, l. c. p. 84 *(ex parte)*.

Pronotum similar in the sexes, its postero-lateral forming with its antero-lateral margin a distinct angle in both; that of the male differing from that of the female only in being rather less expanded, and consequently less convex, postero-laterally.

Femoral blotch broader, extending on to the primitive femur up to the inner end of the unequal groove and not bordered with green.

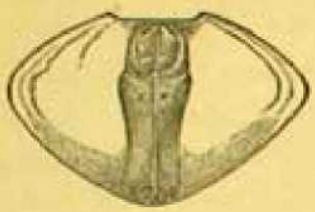


Fig. 14, ♂.

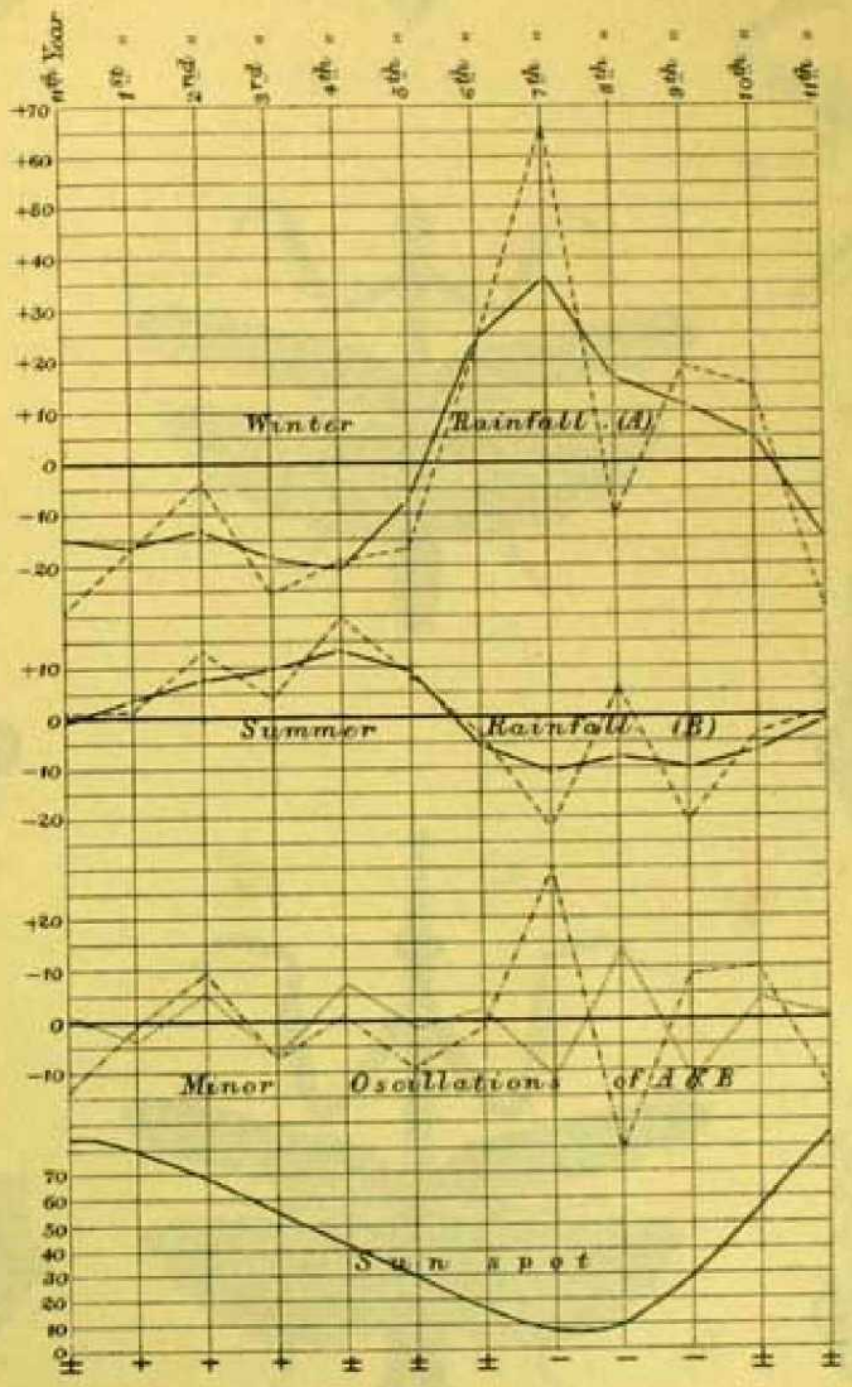
Fig. 15 ♀.

It is much more probable that the insect obtained by M. Jansen in the neighbourhood of Madras and described by Lucas as the opposite sex of De Saussure's species is a female of the preceding than of this species.

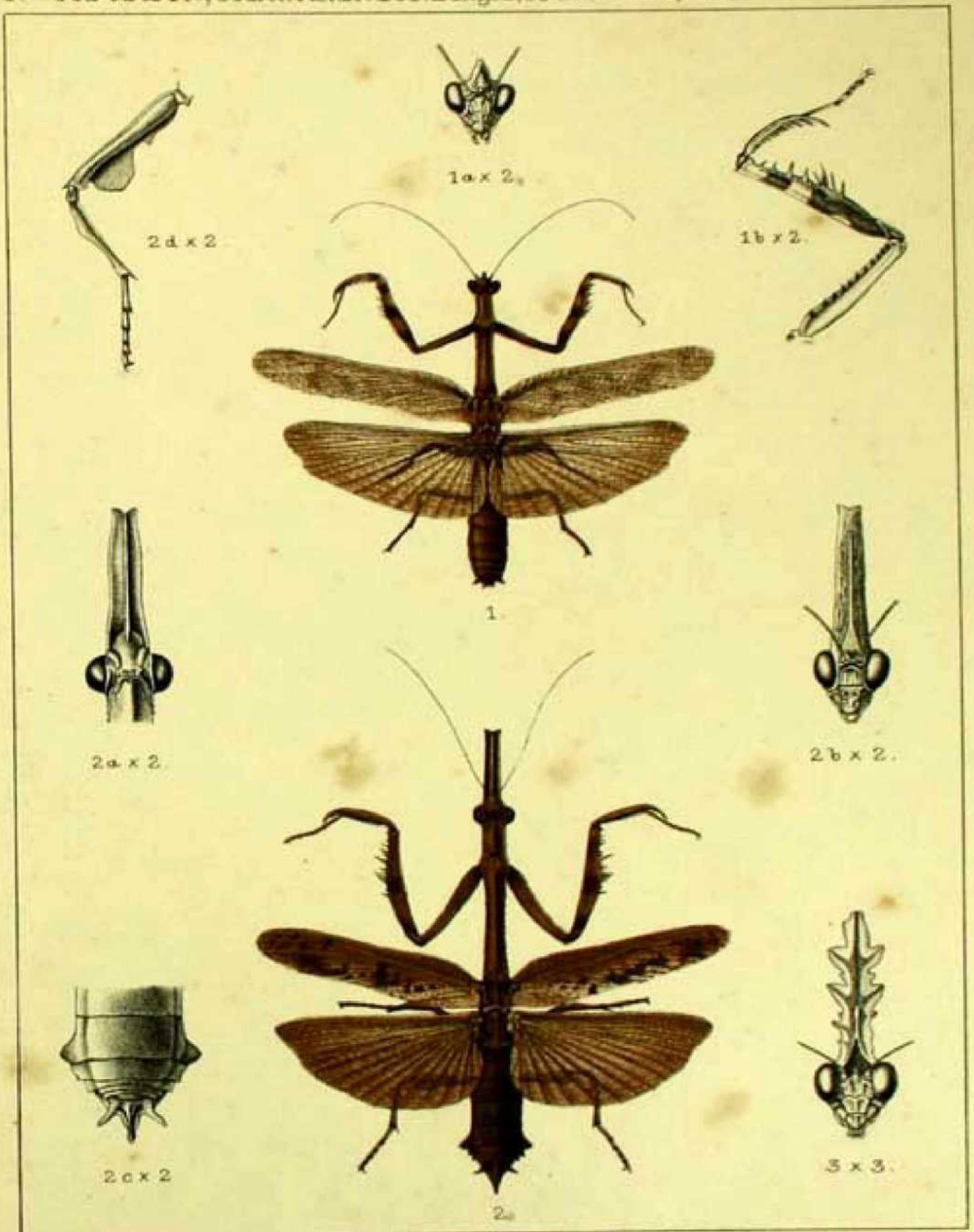
Hab. Ceylon, ♂ et nymph in Geneva Museum, ♂ ♀ and larvæ in Museums of Calcutta and Colombo.

I am indebted to the courtesy and liberality of the Trustees of the Colombo Museum for perfect insects and nymphs, and to Mr. F. M. Mackwood for a nymph of this species.

In Fig. 14, the left lateral angle has been much too rounded off by the engraver; it should be like the right.



Lithographed at the Survey of India Offices, Calcutta, December 1894.



B.L.D. et J.W-M. del. Mintern Bros. imp. Parker & Coward. lith.

1-2. Phyllothelys westwoodi, ♂ ♀.

3. Phyllothelys paradoxum, ♂ nymph.

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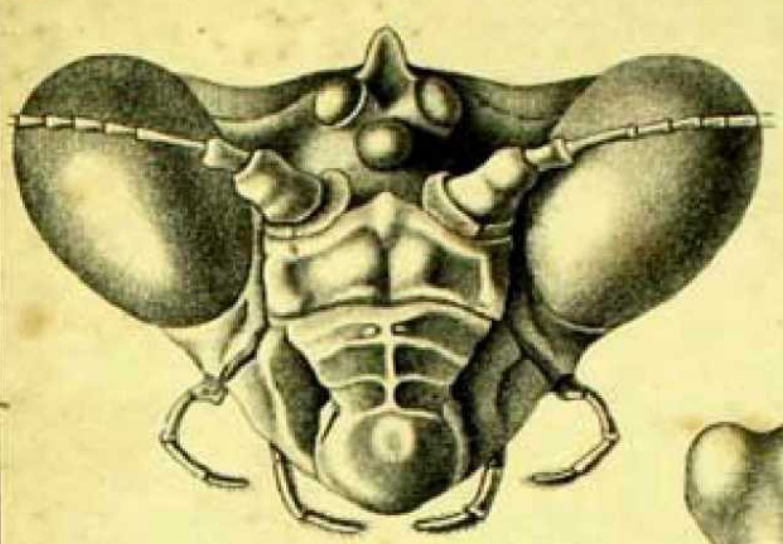
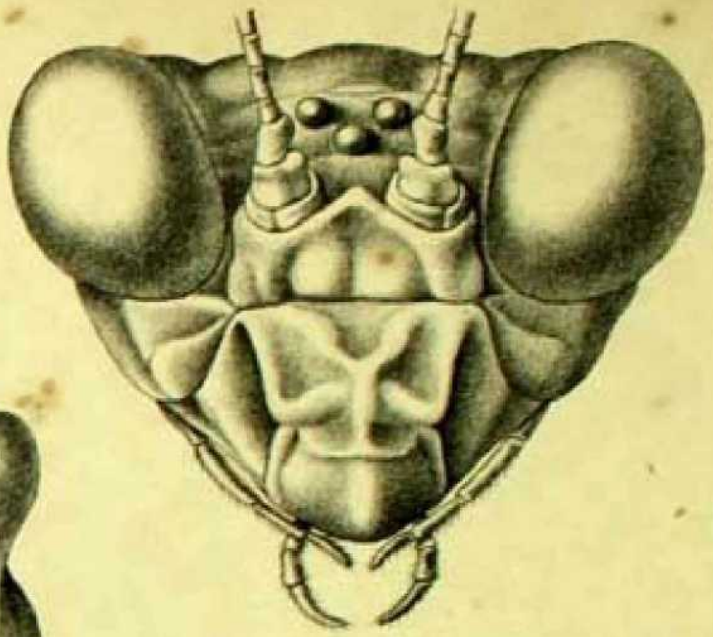
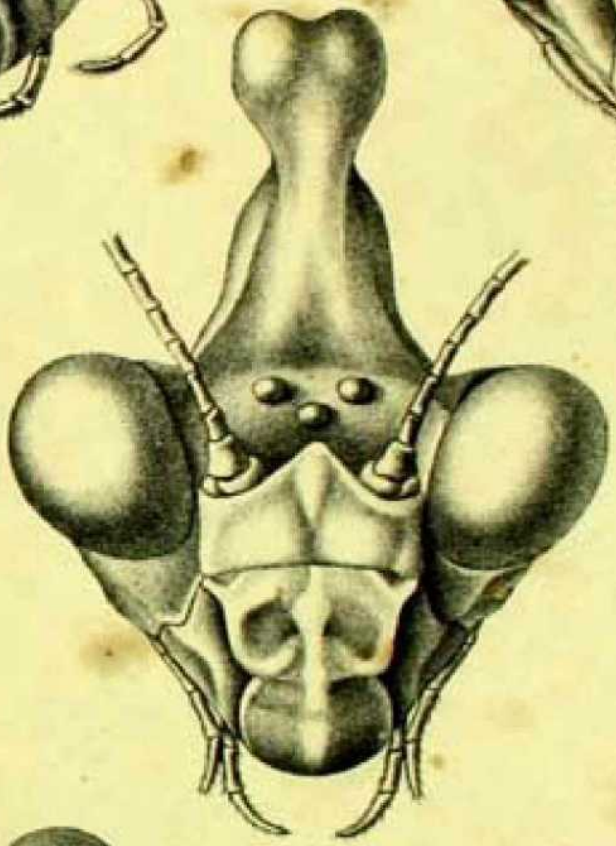


2 × 16.

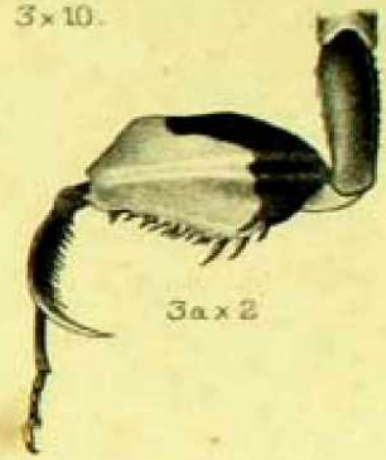


3 × 10.

2a × 2.



1a × 10.



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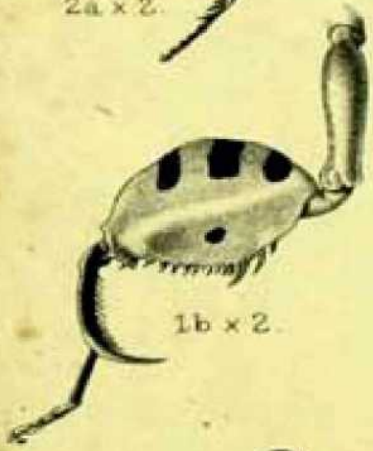

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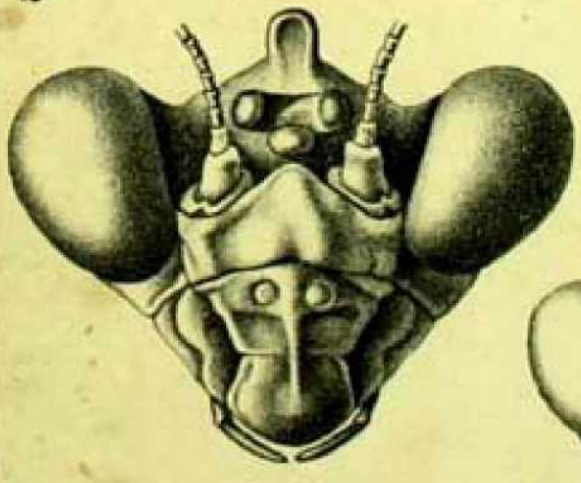

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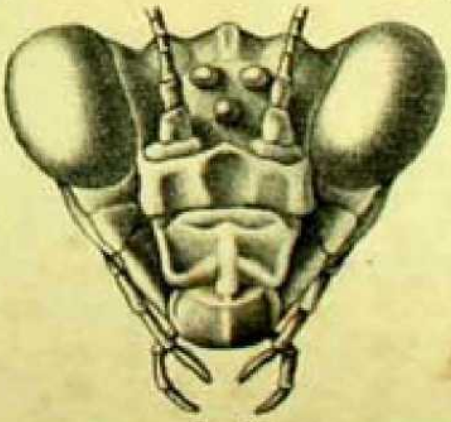
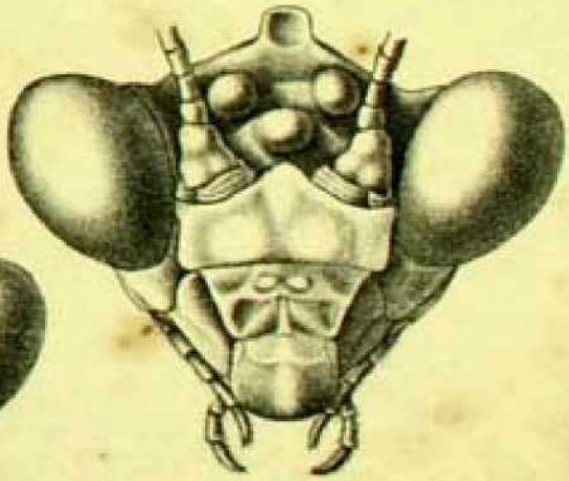


5 × 10.



4 × 10.

5a × 2.

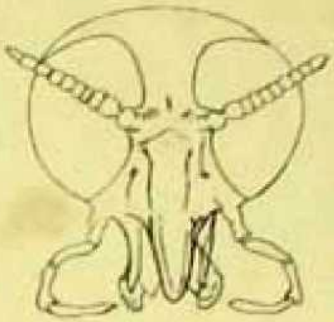
4a × 2.

B.L.D. del. J.W-M. dir. Mintern Bros. imp. Parker & Coward. lith.

Genus HESTIAS.

7 x 90.

10 x 90.



6 x 30.

8 x 90.

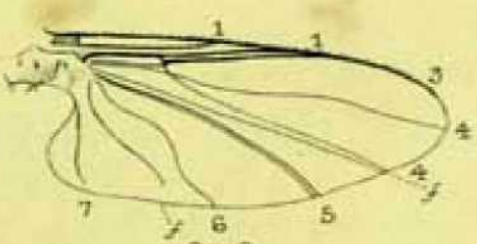
9 x 90.

12 x 6.

1 x 8.

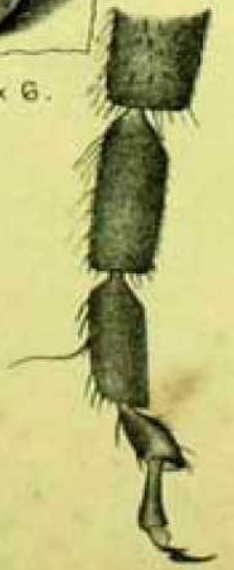
11 x 6.

13 x 6.



2 x 8.

3a x 15.



3b x 60.

4a x 15.

4b x 60

5a x 15.

5b x 60

Autor del. Mintern Bros. imp. Parker & Coward. lith.

SIMULIUM INDICUM.

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* The publication of the article for which this plate has been prepared, is deferred in consequence of the acquisition of fresh material since it was written.

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ERRATA.

Page 17, sixth line from top, for "*rura*" read "*rara*."
" " sixth line from bottom, for "tripupilled" read "bipupilled."
" 19, ten lines from bottom, omit the word "and" after "conspicuous."
" 23, thirteen lines from top, for "subbasal" read "subanal."
" " five lines from bottom, for "*lycæna*" read "*lycænina*."
" 24, fourteen lines from top, for "*bracteala*" read "*bracteata*."
" 25, fourteen lines from bottom, for "near" read "nearer."
" 27, eleven lines from top, for "black" read "band."
" 28, eleven lines from top, for "*lunulifer*" read *lunulifera*."
" 38, ten lines from top, for "Catal. Lyc, Brit. Mus. p. 3. pl. 8, fig. 92, 93 (1862)," read "Illus. Diurn. Lep., *Lycænidæ*, p. 14*g*, pl. 3*b*, figs. 48, 49 (1869)."
" 40, twelve lines from bottom, substitute a hyphen for the comma between the words "cell" and "streak."
" 41, fifteen and fourteen lines from bottom, for "ABSENS" and "*absens*" read "ABSEUS" and "*abseus*."
" 48, twelve lines from top, for "564" read "594."
" 52, two lines from top, for "xxii" read "xii."